

SOAP AND CHEMICAL SPECIALTIES

MAY 1960



"Rapid product advances are the key to continued success" in the chemical specialties industry, Howard M. Packard, president of T. C. Johnson & Son, Inc., states in discussing "Specialties in the States" on page 120.

IN THIS ISSUE

Proceedings of sales builders	85
CEMA's 48th Midyear Meeting	97
New Chicago chemical plant	127
Food additives law	140

FOR THAT

AEROSOL

IN YOUR FUTURE...

Thoroughly tested perfume compounds,
developed in the D&O Perfume Department and
checked through all stages to finished product in the
Aerosol Laboratory. Shelf tested for stability,
corrosion and clogging difficulties. Solubility
and discoloration problems eliminated.

Complete data, including formulations, available.
Let the D&O Perfume and Aerosol technicians
put that sales-clinching (problem-free)
fragrance into the "Aerosol in Your Future."



WRITE
FOR
COPY OF
THE
NEW
AEROSOL
BROCHURE

"Essentially for you"



Our 161st Year of Service

DODGE & OLCOTT, INC.

180 VARICK STREET • NEW YORK 14, N.Y.

Sales offices in Principal Cities

ESSENTIAL OILS • AROMATIC CHEMICALS • PERFUME BASES
FLAVOR BASES • DRY SOLUBLE SEASONINGS

New **BTC-2125**

(Our 50th Anniversary Achievement)

**. . . for higher
germicidal activity
at no increase
in cost!**

Higher guaranteed minimum phenol
coefficient.

Higher hard water tolerance level—
750 ppm.

Distinctive active ingredient statement.

Onyx BTC-2125 is a most potent germicide that offers the best sanitizing and disinfecting properties to your product. There is no substitute for this blend of two distinct quaternary ammonium compounds. BTC-2125 is designed to obtain

maximum biocidal properties and high hard water tolerance levels. Formulate your detergent sanitizers based on BTC-2125 . . . the germicide that gives you more for your money. Write for technical bulletin and samples.



ONYX
CHEMICALS



ONYX CHEMICAL CORPORATION

190 WARREN STREET, JERSEY CITY 2, NEW JERSEY

FORMERLY ONYX OIL AND CHEMICAL COMPANY

ORYCLON

THE VERSATILE AROMATIC

A most valuable working tool for the perfumer.

Blends well with the Ionones,

Vetivert and in florals.

Sweet, woody and tenacious.

It is one of the most useful
and interesting aromatic chemicals
to be made available
to the perfumer.

*Write for our complete list of specialties
and other aromatic chemicals.*



REGISTERED TRADEMARK

VERONA AROMATICS

A DIVISION OF VERONA-PHARMA CHEMICAL CORP.

Plant and Main Office:

Branch Office:

26 VERONA AVENUE, NEWARK 4, N. J. • 1210 ROSEDALE AVENUE, CHICAGO, ILL.

Cover photo: Howard M. Packard, president of S. C. Johnson & Son, Inc., Racine, Wis., largest U. S. producers of floor products and other chemical specialties, looks at future prospects for these products. See his predictions in "Specialties in the Sixties," appearing on page 100. Behind Mr. Packard are familiar Johnson research tower and headquarters designed by Frank Lloyd Wright, noted architect.

SOAP AND CHEMICAL SPECIALTIES



MEMBER



SINCE 1934

IN THIS ISSUE

55 AS THE EDITOR SEES IT

59 AS THE READER SEES IT

61 DETERGENTS, CLEANSERS, SOAPS

63 PREMIUMS, *by D. H. Trott*

66 OLDEST SOAP MAKER IN WEST

71 LIQUID DRYCLEANING DETERGENTS, *by Jerome B. Schapiro*

73 SOIL REDEPOSITION BY DETERGENTS (Part II), *by Albert R. Martin and Richard C. Davis*

89 CHEMICAL SPECIALTIES

97 CSMA MEETING IN CHICAGO

100 SPECIALTIES IN THE SIXTIES, *by Howard M. Packard*

101 TOXICANTS FOR BODY LICE CONTROL, *by M. M. Cole, P. H. Clark and Carroll N. Smith*

113 MARKETING CHEMICAL SPECIALTIES, *by T. Carter Parkinson*

119 PRODUCTS LIABILITY INSURANCE, *by Norman H. Warren*

127 DISINFECTANTS FOR BEDDING (Part II), *by Milton J. Foter*

147 NEW CAPITOL AEROSOL PLANT

150 FOOD ADDITIVES, *by John D. Conner and Robert L. Ackerly*

153 NEW CARBIDE CHEMICAL SPECIALTIES LAB

163 PACKAGING

171 PACKAGING SHOW

177 NEW PRODUCTS PICTURES

183 NEW TRADE MARKS

187 PACKAGING NOTES

198 PRESSURE PACKAGING

210 AEROSOL PATENTS

213 PRODUCTION

215 WASHING POWDERS SANS SPRAY DRYING, *by A. Davidsohn*

223 SOAP PLANT OBSERVER

225 NEW PATENTS

227 PRODUCTS AND PROCESSES

229 BOOK REVIEWS

231 BULLETINS AND EQUIPMENT

233 NEWS

263 CLASSIFIED ADVERTISING

270 ADVERTISERS' INDEX

271 MEETINGS CALENDAR

272 TALE ENDS

FRANK J. REILLY
Editor

CHARLOTTE HAAS
Associate Editor

EDWARD BLOCH
News Editor

THOMAS MORGAN
Advertising Manager

ALVIN PLOFSKY
Production Manager

ESFERA FAY
Circulation Manager

Published monthly by
MAC NAIR-DORLAND COMPANY, Inc.

IRA P. MAC NAIR
President

GRANT A. DORLAND
Vice-President and Treasurer

Publication Office
254 W. 31st St., New York 1, N. Y.
Telephone Bryant 9-4456

Chicago Office
612 N. Michigan Ave.

OFFICIAL PUBLICATION
CHEMICAL SPECIALTIES MANUFACTURERS ASSN

Subscription rates: U. S., \$4.00 per year; Canadian, \$5.00; Foreign, \$11.00 (two years only). Copy closing dates—15th of month preceding month of issue for reading matter; 10th of month preceding month of issue for display advertising. Single copies: Current issues, 50¢; all back issues, \$1.00. Claims for missing copies must be received within 60 days of mailing date. Second class postage paid at New York, N. Y., and at Baltimore, Md.

SURFACTANTS

YOU CAN SAVE WITH
AMERICA'S MOST COMPLETE LINE OF



THE PRODUCTS

LAURYL SULFATES

STEPANOL WA	Sodium Lauryl Sulfate
STEPANOL WAT	Triethanolamine Lauryl Sulfate
STEPANOL DEA	Diethanolamine Lauryl Sulfate
STEPANOL MG	Magnesium Lauryl Sulfate
STEPANOL AM	Ammonium Lauryl Sulfate
STEPANOL T-28	Foam stabilized blend
STEPANOL ME DRY	Powdered Sodium Lauryl Sulfate
STEPANOL ME DRY AW	Powdered - dentifrice grade

NONIONICS

MAKON 4, 6, 10, 14, 30	Nonyl Phenol Ethylene Oxide condensates
STEPANOL TBK	Alkoxy Polyoxyethylene Ethanolamine
AMIDOX L SERIES	Ethoxylated amide
AMIDOX C SERIES	Ethoxylated amide
MAKON B SERIES	Mixed Alkyl Phenol Ethoxylates

SULFONATES

STEPAN DS-60	Desalted Sodium Alkyl Aryl Sulfonates
--------------	---------------------------------------

LABORATORY ASSISTANCE

The Stepan Chemical Company has complete laboratory facilities to assist you in every way possible toward developing the product most suited to your needs. Our technical staff will be pleased to consult with you on new products as well as new applications of our present products.

STEPAN
CHEMICAL COMPANY

NEX 30

EPAN A

NEX 30

EPANA

EPANA

NATE 4

NATE 4

EPAN D

ULFONIC

ULFONIC

PROTEIN

AYPON 4

AYPON F

AYPON S

LYLOL

NOL 128

NOL 128

NOL 128

NOL 128

NOL 128

NOL 128

NOL 128

NOL 128

NOL 128

NOL 128

NOL 128

NOL 128

NOL 128

NOL 128

NOL 128

NOL 128

NOL 128

STEPPERMARKE

ONE-STOP BUYING FROM
SYNTHETIC DETERGENT RAW MATERIALS

NEX 300 Triethanolamine
Alkyl Aryl Sulfonate
EPAN AAAS Ammonium
Alkyl Aryl Sulfonate
NEX 303 Sodium
Xylene Sulfonate
EPANATE T Sodium
Toluene Sulfonate
EPANATE K Potassium
Toluene Sulfonate
NATE 411 Oil Soluble Amine
Alkyl Aryl Sulfonate
NATE 401 Oil Soluble Calcium
Alkyl Aryl Sulfonate
EPAN DT-20 Potassium
Alkyl Aryl Sulfonate
with coupler
ULFONIC 90 Dodecylbenzene
Sulfonic Acid
ULFONIC 100 Dodecylbenzene
Sulfonic Acid

PROTEIN CONDENSATES

MAYPON 4C, 4CT Mild, non-irritating
protein condensates
MAYPON POLYPEPTIDE 37 Sodium salt of
polypeptide
MAYPON SK Sodium salt of pro-
tein condensate ...
Soluble in high alkali
concentrates

ALKYLOLAMIDES

NINOL 1281 Coconut
Diethanolamide

NINOL 1301 New type, quater-
nary compatible
amide
NINOL AA-62 Lauric Alkylolamide
NINOL AA-62 EXTRA ... High Active
Lauric Alkylolamide
STEPAN LIPA Lauric Mono-
isopropanolamide
NINOL 201 Oil Soluble
NINOL HA-10 Alkylolamides
STEPAN HDA-7 Alkali soluble
Alkylolamide
STEPAN T-6-B Cosmetic grade
Alkylolamide

BLENDED EMULSIFIERS

TOXIMUL R & S All-purpose pair for
all pesticides
TOXIMUL LF Universal emulsifier
for pesticides in
liquid fertilizers
EMULSIFIER WHC Single emulsifier for
Waterless Hand
Cleaners

BLENDED DETERGENTS

STEPAN LD-55A Liquid Dishwash,
ready to package
NINEX 26 Highly concentrated
liquid detergent for
further dilution

ALSO

NONYL PHENOL
PARA-TERTIARY BUTYLPHENOL
METHYL ESTERS • CRUDE GLYCERINE

AMONG THEIR USES

HAIR SHAMPOOS

STEPANOL WA, WAT • MAYPON 4C, 4CT
POLYPEPTIDE 37 • NINOL AA-62 EXTRA • STEPAN T-6-B

LIQUID DETERGENTS

STEPAN LD-55A • STEPAN DS-60
NINOL AA-62 OR AA-62 EXTRA
STEPANOL B-153 • MAKON 10 • NINEX 26

SYNTHETIC FLOOR CLEANERS AND WAX STRIPPERS

NINOL 1301 • NINOL 1281 • STEPAN HDA-7 • NINEX 303

STEAM CLEANERS, WHITE WALL TIRE CLEANERS

NINEX 24 • MAYPON SK

DEGREASERS

NINATE 411 • NINOL 201 • MAKON BXA, BXX

RUG SHAMPOOS

STEPANOL T-28 • MAYPON SK • STEPAN LIPA

CLEANER SANITIZERS

MAKON 10 • NINOL 1301

WATERLESS HAND CLEANERS

EMULSIFIER WHC

AGRICULTURAL SPRAYS

TOXIMUL R & S • TOXIMUL LF • MAYPON K

HEAVY DUTY LIQUIDS

STEPANATE T AND K • MAYPON SK
STEPAN DT-20 • AMIDOX C-2

ALL-PURPOSE LIQUID HOUSEHOLD CLEANERS

NINOL 1301 • STEPAN DS-60 • NINOL 1281

CUTTING FLUIDS

STEPAN C-65, C-68 • MAKON BXX, BXA • NINOL 201

SALES • SERVICE • WAREHOUSE STOCKS

You will find Stepan offers prompt service with technically
qualified field salesmen and representatives, located in important
production areas throughout this country and in Canada.

WAREHOUSE STOCKS: Maywood, New Jersey • Tampa • Atlanta • Chicago
St. Louis • Dallas • Los Angeles • San Francisco • Portland
In Canada—Charles Tennant & Co., Ltd.: Toronto • Montreal • Vancouver

STEPAN
CHEMICAL COMPANY

427 W. Randolph Street, Chicago 6, Illinois
Telephone: STate 2-4711

SEND COUPON FOR BULLETINS—SAMPLES—PRICES**

STEPAN CHEMICAL COMPANY

427 W. Randolph Street, Chicago 6, Illinois

S-5

Gentlemen:

Please send me complete information, and samples of.....

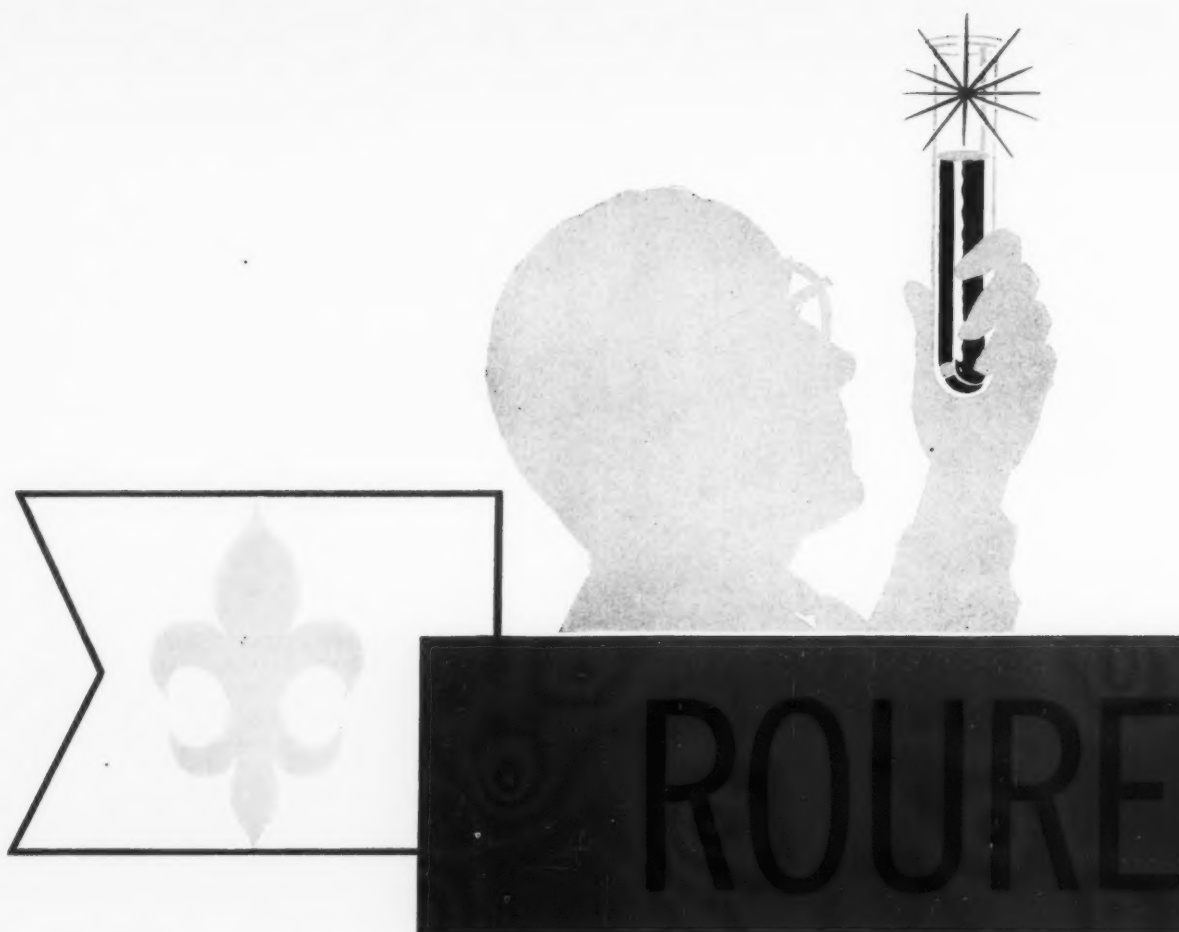
Name

Firm

Street

City

Zone State



WORLD-WIDE RESOURCES WORLD-WIDE SERVICES

Roure-Bertrand Fils, Grasse, and Justin Dupont, Argenteuil, France, as well as their facilities in North Africa, India, the Far East and South America, have for decades been prime processors of basic ingredients for the perfumers of the world.

Their creative genius is attested by the many proven international successes in the field of fragrance requirements . . . be it in the development of original perfumes, colognes, aerosols, cosmetics, soaps and other toiletries . . . or in the masking area where odors have to be covered rather than developed.

Roure-Dupont, Inc. technical staff is in a unique position to put its vast international facilities and know-how at your disposal.

ROURE-DUPONT, INC.

Sole Agents for the United States and Canada for
ROURE-BERTRAND FILS et JUSTIN DUPONT, Paris, Grasse

CHICAGO
510 North Dearborn

366 Madison Avenue, New York
• MURRAY HILL 7-5830 •

HOLLYWOOD
5523 Sunset Blvd.



DUPONT

ORIGINAL FRAGRANCE CREATIONS

ESSENTIAL OILS
AROMATIC CHEMICALS

AEROSOLS

THE ULTRAWETS®— ATLANTIC'S VERSATILE FAMILY OF SUPERIOR DETERGENTS

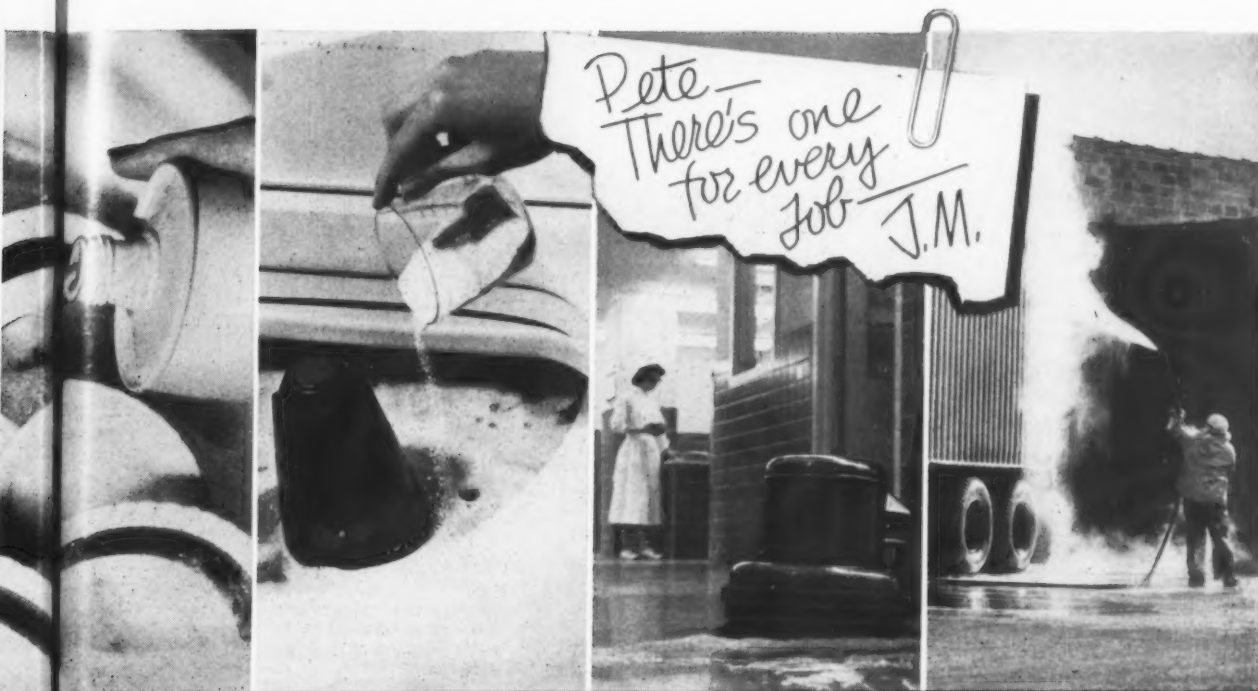
The right
alkyl aryl sulfonate for
every formulation



Which Ultrawet is right for you?

Check this chart . . . you'll find an Atlantic Ultrawet for every formulation!

	Ultrawet	Solids	Molecular Weight	Appearance	Active Minimum	Recommended Applications
LIQUIDS Clear	30DS	30%	Medium	Clear, pale yellow	25.5%	Penetrant, wetting agent, metal cleaner, emulsion polymerization.
	60L	60%	High	Clear, pale yellow	60.0%	Liquid detergents, wet textile processing, shampoos, car wash, household detergent formulations, janitorial supplies.
	35KX	35%	Medium	Clear, pale yellow	31.5%	Liquid detergents and household cleaners, wet textile processing, emulsion polymerization, post stabilizer for emulsions.
Slurries	35K	35%	High	Pale yellow	31.5%	Drum-dried and spray-dried cleansing compounds, light and heavy duty liquid detergents.
FLAKES	DS	100%	Medium	Light, cream colored	90%	Industrial detergents, emulsifier, dry mixing with alkalies, air entraining agent.
	K	100%	High	Light, cream colored	90%	Industrial detergents, heavy-duty household detergents, emulsifier, dry mixing with alkalies.
	K Dense	100%	High	Light, cream colored	90%	Same as above.
	KX	100%	Medium	Light, cream colored	90%	Same as 35KX in dry form.
	KX Dense	100%	Medium	Light, cream colored	90%	Same as KX—except smaller particle size with increased density, air entraining agent.
BEADS	SK Bead	100%	High	White, free flowing	40%	Light-duty household detergents, dry mixing with alkalies.
	SK Bead High Density	100%	High	White, free flowing	40%	Same as above—synthetic wool washes, air entraining agent.



Ultrawet quality advantages give you...

1 High Detergency. Finished products can penetrate deep and fast resulting in a thorough cleaning action even in hard water.

2 Superior Foam. Your detergent produces copious quantities of foam with prolonged stability, affording more cleaning efficiency.

Chemically the Ultrawets are alkyl aryl sulfonate type anionic surface-active agents with less than 0.1% unreacted oil content. They are stable in acid and alkaline media; and their low sensitivity to calcium, magnesium, and other heavy metal ions makes them especially desirable in hard water. They are compatible with acid, alkaline, and neutral salts, soaps, anionic and nonionic detergents, and other materials commonly used in household and industrial cleaning compounds.

3 Light Color. The excellent, light colors of Atlantic Ultrawets produce better color and better color control of all finished products.

4 Freedom from Odor. Atlantic Ultrawets have minimum odor resulting in greater shelf-life odor stability.

You are invited to consult Atlantic's experienced sales engineers, graduate chemists and chemical engineers especially trained in formulations employing any of Atlantic's great variety of Ultrawets. Without obligation, you will receive technical assistance and information to improve products or processes, or for developing new applications, or for new ways to cut manufacturing costs. Write to Chemicals Division, The Atlantic Refining Company, 260 South Broad Street, Philadelphia 1, Pa.

THE ATLANTIC REFINING COMPANY

ATLANTIC

**PETROLEUM
CHEMICALS**

Philadelphia • Providence • Charlotte • Chicago • Los Angeles
IN CANADA: Naugatuck Chemicals Division of Dominion Rubber Co., Ltd.
IN EUROPE: Atlantic Chemicals SAB, Antwerp, Belgium
IN SOUTH AMERICA: Atlantic Refining Company of Brazil, Rio de Janeiro

STEER A STEADY COURSE with CANDY PRODUCTS

PRIVATE BRAND* RESALE BUYERS OF WAXES
AND KINDRED PRODUCTS... Your Quality Guide...

Beauty and Durability

Initial appearance is important, but for a waxed surface to remain beautiful, it must be durable. Durability depends not only on resistance to abrasion of traffic but even more so on resistance to discoloring marks. Durability should be measured by how long the waxed surface maintains a nice appearance before complete removal and re-waxing is required.

Anti-Slip

Anti-slip, or reasonable safety underfoot, does not mean that the qualities of beauty and protection need be sacrificed. The proper balance—a wax film which is not excessively slippery, yet which is not tacky and does not collect dirt readily—gives the performance that answers the foremost original reason for use of a floor wax—beauty and protection.

Water Resistance

Frequent damp mopping or wet traffic can make water resistance very important. Overdoing this quality when no problem exists out of the ordinary, simply increases the difficulty of complete removal or applying multiple coats. Removability must be considered as important as water-resistance under most normal conditions.

Solid Content

The percentage of solid content is not nearly as important as the **quality** of the solids. Good quality indicates 12% of solids as the answer for most well planned maintenance programs. Two applications of 12% gives better results than one of 18%. "Washed out" floors and other special problems maintain better when more concentrated waxes are used. Over-waxing and resultant greater difficulty in removal for periodic maintenance should be avoided.

Carnauba Wax

The most important features of a good wax... all-around quality of performance... are built around Carnauba Wax. When refined and compounded with other additives and scientifically controlled in manufacture, Carnauba imparts the beauty and protection that makes the use of floor waxes both profitable and possible. Make-shift manufacture or over-emphasis on any one given wax feature should be avoided and proper care taken to provide for most satisfactory performance.

Other CANDY & CO.
HIGHEST QUALITY PRODUCTS

WATER EMULSION WAXES

Each of Candy's floor waxes are all-around top quality for certain traffic conditions. They impart the finest protection and beauty to floors for which best suited.

CANDY'S SUPREME (standard)

BRIGHT BEAUTY®

CANDY'S SUPREME Special WR

SUPER CANDI-COAT®

CANDI-DOY® #CS

CANDI-BIX #6000

CANDI-COAT 1000, WATER RESIN EMULSION—As a floor coating for use under specific conditions of continued maintenance on certain types of floors this water resin emulsion has none of the faults associated with coatings of this type. It is the finest product in its class produced up to this time.

Bright Beauty WAX REMOVER & all-purpose SURFACE CLEANER—For removal of water-emulsion waxes from any floor without harmful effects. It is the perfect maintenance program wax remover and all-purpose surface cleaner. Pleasant odor, crystal clear color and thorough cleaning action with all types of equipment. Unaffected by hard freezing. Furnished ready for resale or in concentrated form for local packaging... nothing but water to buy or mix in.

CANDI-CLEAN all surface—all synthetic CLEANER—This is an all synthetic and all purpose surface cleaner with free rinse and free wipe off qualities. Furnished in several colors and odors, and properly priced. Available in two concentrations for resale and in concentrated form for dilution with water for local packaging.

Bright Beauty CREAM FURNITURE POLISH—A cream furniture polish that spreads easily, polishes without excessive effort to a deep impressive lustre. Permits repeated repolishing with a dry cloth, thus saving many re-applications. A very economical polish of the very highest quality.

Bright Beauty PASTE WAX—Properly blended and refined from excellent quality solids and solvents that produce the best drying time and evaporation. Easy to handle, having "creamy" consistency and stability that lasts throughout storage and usage life.

Bright Beauty LIQUID (spirit) PREPARED WAXES—A complete line of spirit dissolved waxes that meet a wide variety of demands for durability, color and types of usages. Each acts as a "dry cleaner" to keep surfaces wax protected with a superb coating necessary for many applications such as wood and certain other types of floors; for bars, wallpaper, etc.

Bright Beauty GLASS POLISH & CLEANER and SILVER POLISH—As a glass cleaner (pink color) it applies evenly with little effort, wipes off easily with negligible "powdering" and produces an undeniable "feel" of cleanliness to glass. As a cleaner of silver, it polishes to a high lustre without abrasion and can even correct the abuses of scratchy "quick-polish" inferior products.

Bright Beauty DANCE FLOOR WAX—Does not "ball-up" and gather dirt that impregnates floors with hard spots difficult to remove... free from dusty effects. Its protective quality adds more "floor-years" to expensive ballroom floors.

Bright Beauty Heavy Duty PASTE CLEANER—Cleans and scours more effectively and quicker than most scouring powders. Depending on application, it can clean to perfection even painted walls to provide a suitable repainting surface. 100% active, free from excessive abrasive qualities, it frees almost every surface from all foreign matter.

CONTAINER SILK SCREEN LABELING—Now you can have dramatic, colorful labeling of your private brand name on all 55, 35, 30, 20 & 15 gal. drums and 5 gal. pails. This added service is accomplished right in our plant... your inspection invited... or write for details.

* All Candy's products are available for private brand resale and are sold only through distributors except for experimental accounts in Chicago essential to research.

Candy & Company, Inc.
EST. 1891

Wax Specialists for over 65 years

2515 W. 35th ST., CHICAGO 32

fmc

**CHLOR-
ALKALI
DIVISION**

**supplies
industry
with...**

**high purity
SODA ASH**

- Refined from mined sodium sesquicarbonate
- Free-flowing
- Minimum dusting
- Low in iron, heavy metals and insoluble residues; ammonia-free
- Light and dense grades

CAUSTIC

- **CAUSTIC SODA**
Liquid 73%
Liquid 50%, Regular and Low-Chloride Grades
Flake, Solid and Ground
- **CAUSTIC POTASH**
45% and 50% Liquid
Flake

CHLORINE

- Low in moisture, organic impurities, chloroform, chlor-ethylenes and residual gases
- Tank cars or ton cylinders

... and experienced service!

Our South Charleston, W. Va. plant is strategically located to serve caustic and chlorine users throughout the industrial East, South and Midwest. Soda ash users benefit from the dependable supply situation created by our vast mineral resources at Westvaco, Wyoming.

Our nearest office will gladly quote on your needs.



Putting Ideas to Work

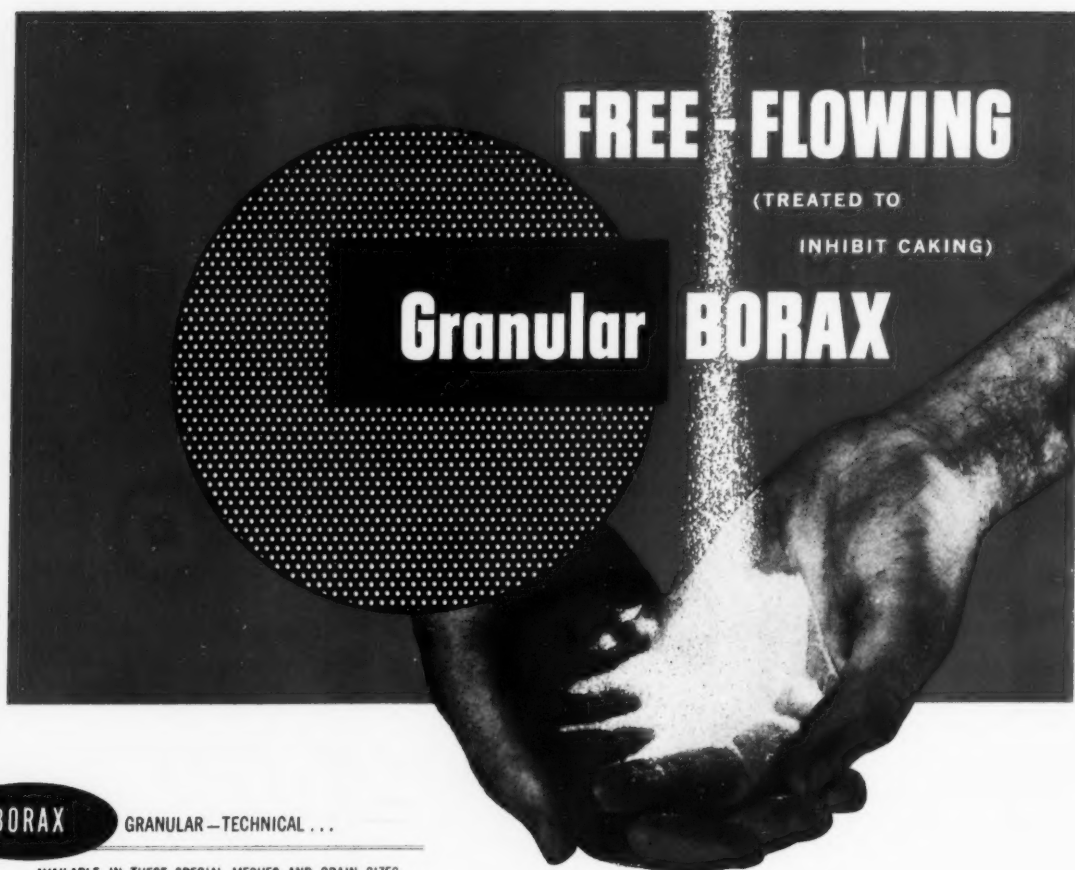
FOOD MACHINERY AND CHEMICAL CORPORATION

Chlor-Alkali Division

General Sales Offices:

161 E. 42nd STREET, NEW YORK 17





BORAX

GRANULAR—TECHNICAL...

AVAILABLE IN THESE SPECIAL MESHES AND GRAIN SIZES...

Name & Screen Designation	Typical Particle Size Range U. S. Standard Sieve No.	Screen Specification U. S. Standard Sieve No. When Packed
Granular 8/40 (Special Mesh)	+ 8 Nil + 40 96.8%	+ 45 min. 95%
Granular 8/60 (Special Mesh)	+ 8 Nil + 60 80.0%	+ 8 none + 100 min. 90%
Granular 30/60 (Special Mesh)	+ 30 0.5% + 60 69.8%	+ 30 max. 1% + 100 min. 80%
Granular 30/70 (Special Mesh)	+ 30 0.3% + 70 71.0%	+ 30 max. 1% + 40 max. 20%
Granular 30/80 (Special Mesh)	+ 30 0.8% + 80 76.6%	+ 30 max. 1%
Granular 30/100 (Special Mesh)	+ 30 Nil + 100 86.7%	+ 35 none + 100 min. 85%
Granular 40/100 (Special Mesh)	+ 40 Nil + 100 89.0%	+ 40 max. 0.5% + 100 min. 88%
Granular 40/140 (Special Mesh)	+ 40 0.1% + 140 88.8%	+ 35 none + 100 min. 50%
Granular 40/200 (Special Mesh)	+ 40 0.1% + 200 84.1%	+ 30 none
Granular 60/200 (Special Mesh)	+ 60 0.1% + 200 66.7%	+ 60 max. 1%
Granular 80/200 (Special Mesh)	+ 80 2.0% + 200 67.6%	+ 60 none + 80 max. 5%

Powdered Hand Soaps are better performers when borax is part of their make-up. They work better in any water — cut grease quicker — and feel smoother. Our granular borax is free-flowing and 100% soluble. This material is now available to you in any of the many special uniform meshes listed at left. Samples, bulletins, or technical advice can be obtained from the sales office nearest to you. Write today!



U. S. BORAX & CHEMICAL CORPORATION

- NEW YORK • 50 Rockefeller Plaza, New York 20
- CALIFORNIA • 630 Shatto Place, Los Angeles 5
- ILLINOIS • 3456 Peterson Avenue, Chicago 45
- GEORGIA • 1145 Peachtree Street, Atlanta 9
- MISSOURI • 4150 Laclede Avenue, St. Louis 8
- OHIO • 5012 Euclid Avenue, Cleveland 3
- PENNSYLVANIA • 302 Wilford Bldg., Philadelphia 4



with detergents made from

NEOLENE 400

The proven chemical intermediate...Neolene® 400... is used by many of the world's leading processors of detergents and surfactants. It is an alkyl benzene of the highest quality and is an exceptional base for both liquid and dry detergents. Why not put Neolene 400 to work for you? Its many outstanding characteristics include:

Stability during sulfonation

Uniformity and purity

Excellent color and odor

Makes detergents with exceptional wetting, cleansing and foam properties



Petrochemical know-how from the ground up!

© 1960, Continental Oil Company

CONSIDER CONTINENTAL'S:

QUALITY—Neolene 400 is consistently high in quality as are all other Conoco petrochemicals. This reputation for quality is the result of steadily improved production facilities and Conoco's determination to find better ways to produce superior products.

QUICK DELIVERY—Conoco's extensive distribution facilities assure you of fast service, whether by tank car, tank truck, or barge. This assurance of quick, efficient delivery simplifies your own inventory and storage problems.

TECHNICAL ASSISTANCE—Whether you purchase in large or small quantities, Conoco technicians stand ready to help you improve a product or a process, to find new applications, to suggest ways of cutting costs.

May we suggest that you call or write today for samples and more information about Neolene 400.

CONTINENTAL OIL COMPANY

Petrochemical Department

1270 Avenue of the Americas, New York 20, N. Y.

European Sales Office: Box 1207, Rotterdam, The Netherlands



The human element

The production of fatty acids by Armour is mostly a process of exacting automation. But no less important is the factor you see illustrated above—the human element. Armour has a full complement of well-trained men. Men who enjoy the challenge of even the simplest of problems. Men whose knowledge and experience contribute immeasurably to Armour quality.

This human element, plus complete instrumentation, enables Armour to produce high quality products, such as Neo-fat® 18. This is Armour's Commercially

Pure Stearic, with an extremely low iodine value, high melting point, and an exceptionally high stearic acid content. Neo-fat 18 is especially noted for its stability, purity, and uniformity from lot to lot. These advantages assure you longer storage stability and product shelf-life, better performance, and a quality reputation.

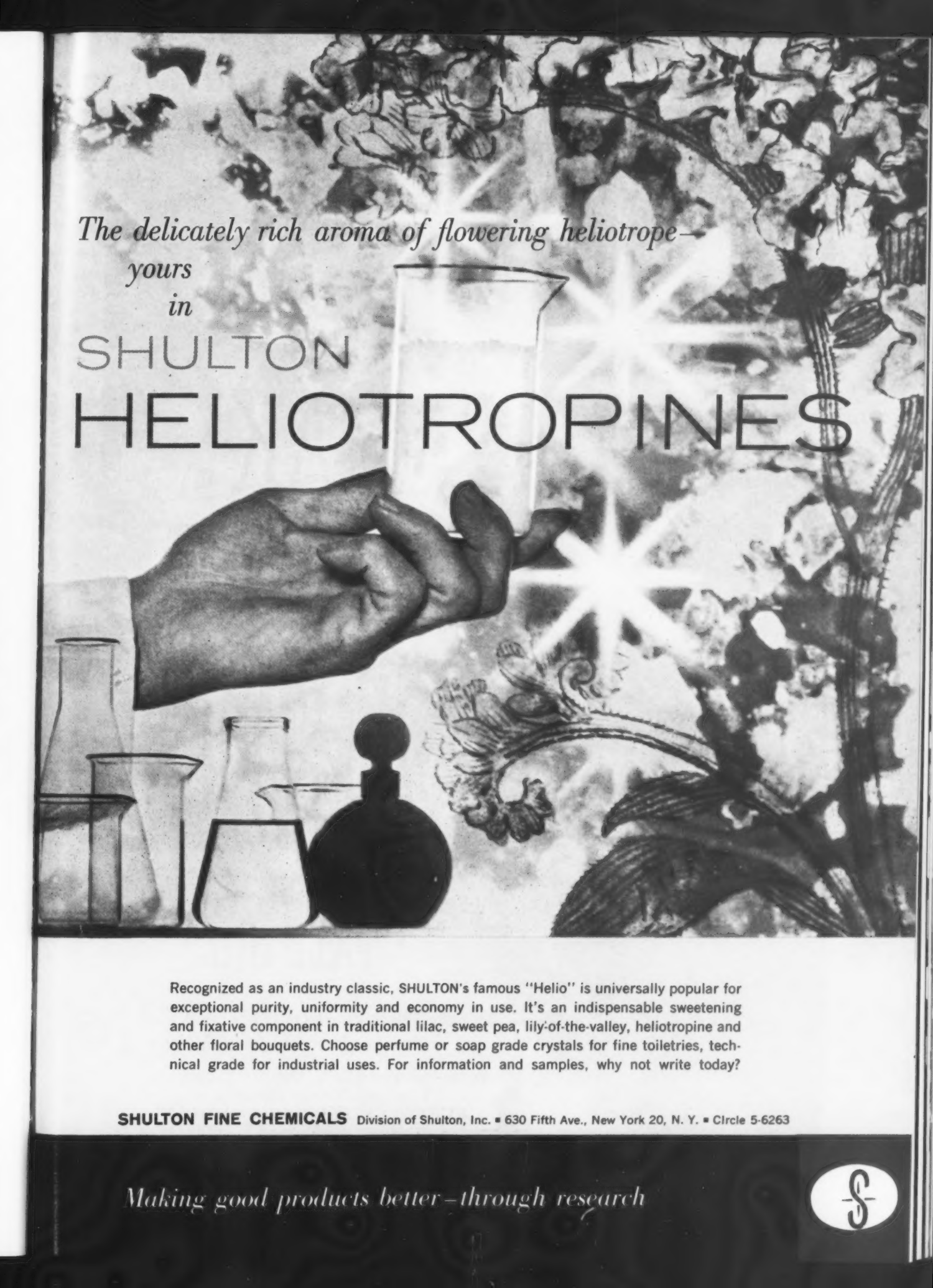
We'll be happy to furnish samples on request. If you'd like to learn more about the way Armour processes fatty acids, you are welcome to visit the Armour plant at McCook, Illinois. Phone or write for details.

See "Chemical Materials Catalog," pp. 291—298b for sales office nearest you.



ARMOUR INDUSTRIAL CHEMICAL COMPANY

©Division of Armour and Company • 110 North Wacker Drive • Chicago 6, Illinois



*The delicately rich aroma of flowering heliotrope—
yours
in*

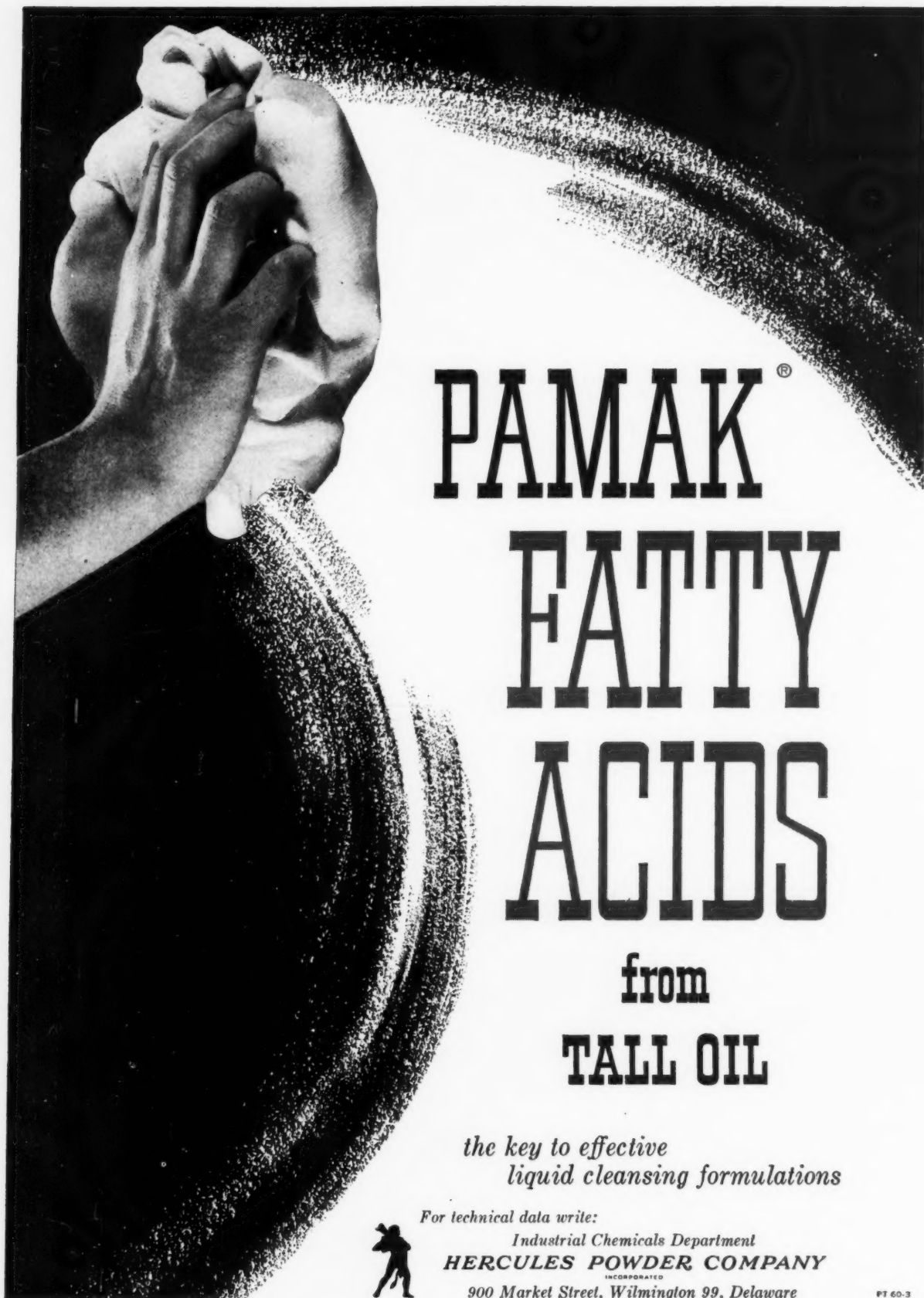
SHULTON HELIOTROPINES

Recognized as an industry classic, SHULTON's famous "Helio" is universally popular for exceptional purity, uniformity and economy in use. It's an indispensable sweetening and fixative component in traditional lilac, sweet pea, lily-of-the-valley, heliotropine and other floral bouquets. Choose perfume or soap grade crystals for fine toiletries, technical grade for industrial uses. For information and samples, why not write today?

SHULTON FINE CHEMICALS Division of Shulton, Inc. • 630 Fifth Ave., New York 20, N. Y. • Circle 5-6263

Making good products better—through research





PAMAK[®] FATTY ACIDS

from
TALL OIL

*the key to effective
liquid cleansing formulations*

For technical data write:



Industrial Chemicals Department
HERCULES POWDER COMPANY

INCORPORATED
900 Market Street, Wilmington 99, Delaware

#1 60-3



The world's most persnickety people will buy
-and buy again-your liquid detergent built
with Monsanto TKPP
(tetrapotassium pyrophosphate)

“Persnickety, that’s me. I like things clean — really clean — without spending half my life in the elbow-grease department. And that’s why I’m crazy about these new, *really effective* liquid detergents*.”



*7 “building” benefits make Monsanto TKPP the one essential

1

*High solubility—
low turbidity*

TKPP is the only alkaline builder so soluble that your liquid detergent can score *peak*, all-purpose cleaning power—you achieve a high concentration while you get a lower-cost compound.

2

*Long
shelf life*

Monsanto TKPP stays fully active and in solution longest of any alkaline builder you can use in your liquid detergents...has performance-proof of trouble-free shelf life.

3

*Controls alkalinity
for best stability*

Through buffering, Monsanto TKPP provides and maintains the optimum pH for best cleaning and solution stability.

4

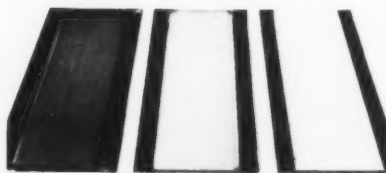
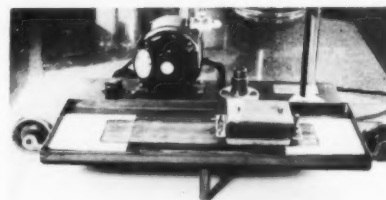
*Excellent hard-
surface detergency*

See how Monsanto TKPP builds heavy-duty scouring action into liquid detergents. Gardner Scrub Test proves effectiveness (below).



Compare the superior solution clarity of a typical liquid detergent compound built with Monsanto TKPP.

Both samples are unfiltered—have same concentration of TKPP. Formulation available on request.



Vinyl floor tile soiled with a blend of metallic dirt, kerosene, petrolatum, lubricating oil, shortening, and scrubbed 200 strokes according to a standard procedure.

DETERGENT WITH NO INORGANIC DETERGENT WITH INORGANIC “A” DETERGENT WITH MONSANTO TKPP



inorganic for all *really effective* liquid detergents

5

*Multiplies
detergency*

Through its own detergent ability and synergism with other ingredients, TKPP boosts liquid detergent cleaning power severalfold.

6

*Keeps dirt
in suspension*

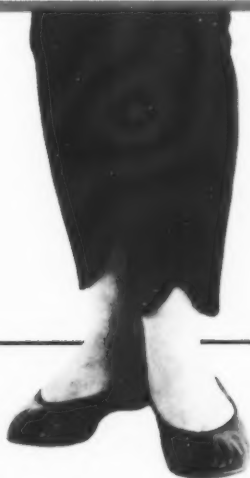
Monsanto TKPP captures soil particles and prevents them from being redeposited on surfaces being cleaned.

7

*Reduces "hard-
water headaches"*

Like Monsanto sodium phosphates, TKPP improves the efficiency of liquid detergents by sequestering the "hardness" and preventing scum formation.

Better performance at low, low cost: this is what Monsanto TKPP can deliver in *all* your medium- and heavy-duty liquid detergents. Consider the seven valuable detergent-building benefits you get with Monsanto TKPP. Small wonder *no* other builder is so essential to liquid cleaner effectiveness and economy.



*More liquid detergent is made with Monsanto TKPP
than with any other inorganic builder*

Monsanto



*You get
lowest-cost
compounding
flexibility with
Monsanto detergent
phosphates...*



*to boost profits,
while making the
most persnickety
people happy **

For volume-discount purchases of Monsanto TKPP in less than car- or truck-load quantities, you can order in mixed shipment with the widest variety of sodium and potassium phosphates available—as well as with a complete line of SANTOMERSE (nonionic) and STEROX (anionic) surface-active agents. For convenience in bulk, you can get Monsanto TKPP in hopper cars designed for unloading dry solids or liquid solutions.

In many ways, Monsanto detergent materials contribute to your formulation ease, flexibility and lowest cost. For more details, TKPP samples or personal help, call your nearby Monsanto representative or service-minded distributor. Or use the convenient coupon.

SANTOMERSE, STEROX: Monsanto
T.M.'s. Reg. U. S. Pat. Off.



MONSANTO CHEMICAL COMPANY
Inorganic Chemicals Division
Department 99B, St. Louis 66, Mo.

I would like to have a: ☐ Technical Bulletin on Monsanto TKPP
☐ Sample (8 oz.) of Monsanto TKPP
☐ Monsanto representative contact me

Name..... Title.....

Company.....

Address.....

City..... Zone..... State.....

AFTER CLOSING ---

Flynn Lever P.A.

Bernard L. Flynn, former assistant general purchasing agent has been advanced to general pur-



Bernard L. Flynn

chasing agent for Lever Brothers Co., New York, it was announced last month by John P. Moser, production vice-president. Mr. Flynn succeeds Harold W. Edwards, who retires after 40 years' service at Lever.

After graduating from Virginia Polytechnic Institute with B.S. and M.S. degrees in chemical engineering, Mr. Flynn joined Lever in 1933. He served at various locations in a variety of manufacturing, and research and development positions. Later he became a buyer of fats and oils and in 1954 he was appointed assistant general purchasing agent.

P&G Earnings Up 22%

Procter & Gamble Co., Cincinnati, earned 22 per cent more in the nine months period ending March 31, 1960 than it did in the corresponding period of 1959.

Consolidated net earnings rose to \$76,925,868 in the nine months ended March 31, 1960, equal to \$3.71 per share. This compares with \$62,904,705 and \$3.05 in the 1959 period.

In the nine months reported provision was made for Federal and other income taxes amounting to \$77,059,000.

Enjay Becomes Humble Div.

Enjay Co., petrochemicals firm, will become Enjay Chemical Co., a division of Humble Oil & Refining Co., Houston, Tex., effective May 31. Announcing the merger, Morgan J. Davis, president of Humble, said that Enjay will market chemical products, coordinate chemical research programs and other chemical activities of the parent organization, and will recommend location and nature of new chemical investments.

Enjay Chemical Co.'s headquarters will be in New York. J. E. Wood III, former president of Enjay Co. will continue as president of the new Humble division.

Gerson Stewart Changes

Gerson Stewart Corp., Cleveland manufacturer of maintenance chemical specialties, announced three executive appointments last month: A. David Imhof, former technical director, was advanced to vice-president in charge of sales and technical service; Paul A. Distad, previously chief chemist, was appointed director of research; and Joseph V. Vermillion has joined the firm as director of man-

ufacturing, according to Lewis R. Schilling, president.

With Gerson Stewart since 1953, Mr. Imhof is now in full charge of sales and customer service activities. He is a graduate of Ohio State and a World War II Air Force veteran. Prior to joining Gerson Stewart, Mr. Distad was research bacteriologist with General Biochemicals Inc. He is a graduate of the University of South Dakota, holds membership in the Institute of Sanitation Management.

Mr. Vermillion will bear responsibility for all phases of manufacturing from receipt of orders through production, packaging and shipping. Gerson Stewart makes floor finishes, polishes, disinfectants, detergents, insecticides, and other specialties.

Lehn & Fink Reports Gains

Advances in sales and profits in the first quarter of this year are reported by Lehn & Fink Products Corp., New York. Net sales in the quarter ended March 31, 1960 rose to \$8,388,946 from \$8,119,134 for the first quarter in 1959 and \$7,310,811 in 1958. Net income after taxes amounted to \$368,113 in the first quarter of 1960, compared with \$307,018 in 1959 and \$284,052 in 1958. In this year's first quarter the company earned \$1.10 per share, in 1959 92 cents, and in 1958, 87 cents.

These figures do not include sales or earnings by the firm's foreign subsidiaries or South American branches.

A. D. Imhof



Paul A. Distad



Joseph V. Vermillion



Field Is Colgate V.-P.

Election of Edward P. Field, Jr., general manager of the associated products division of Colgate-



Edward P. Field, Jr.

Palmolive Co., as a vice-president of the company was announced late last month by Edward H. Little, chairman of the board.

Mr. Field joined Colgate in 1952 as assistant export manager, became export sales manager of Colgate-Palmolive International a short time later. When Colgate-Palmolive Co. was divisionalized in 1957, Mr. Field was appointed general manager of the associated products division which handles sales of bulk soaps and detergents, and other chemical specialties to industry, institutions, and hotels.

Babbitt Reports Profit

B. T. Babbitt Inc. reported at its annual meeting May 2 a four per cent rise in sales for the first quarter of this year over the corresponding quarter of 1959. Sales in this year's first quarter rose to \$5,738,089 from \$5,515,135 in 1959.

Earnings for the first quarter of 1960 were \$14,117 compared with \$204,676 in the corresponding period of last year.

The company noted that the first quarter earnings of 1960 represent the first profit reported since the first quarter of 1959.

Marshall S. Lachner, Babbitt's president, indicated in the annual report that of the total 1959 losses of \$1,589,734, approxi-

mately half were of an extraordinary nature.

Onyx Firms Merge

Onyx Oil & Chemical Co., Jersey City, N. J., was merged with Onyx Chemical Corp., effective March 31. Name of the company will be Onyx Chemical Corp.

The merger was accomplished by acquisition of the outstanding shares of actual Onyx Oil & Chemical stock by Onyx Chemical Corp., which is publicly held. Business will be carried on under the same management and at the same locations. Onyx makes quaternary ammonium germicides, lauryl sulfates, and other chemical specialties.

O-M Advances Tongue

Arthur E. Tongue's appointment as automotive products sales manager was announced last month by Olin Mathieson Chemical Corp., New York. In his new post Mr. Tongue supervises sales of the firm's automotive specialties line including "Pyro" antifreeze and radiator chemicals and "Puritane" brake fluids and related products.

With Olin Mathieson since 1954, Mr. Tongue was formerly sales manager, automotive products, national accounts. In his recent appointment he succeeds James C. Laney, who has been advanced to special assistant to the general sales manager of special products.

Arthur E. Tongue



Schimmel Leaves City

Schimmel & Co. is moving its office and plant to its newly completed building in Newburgh,



Gert Keller

N.Y. Schimmel had been at 601 West 26th Street, New York City ever since its inception in 1934 as subsidiary of the German essential oil house, Schimmel & Co., A.G., at Miltitz. The German firm is today a state run enterprise behind the iron curtain.

The move will be completed before the end of this month according to Gert Keller, who set up the American company and who, together with B. G. Wirsing, is the present owner of the firm. The new location is on Route 32, just south of Newburgh.

French Soap Meeting

A soap industry seminar (Journées d'Information sur la Savonnerie) will be held in Paris, June 13 through 16. Sponsored by ITERG (Institut des Corps Gras), the four day meeting will take place at ITERG's headquarters, 5, Boulevard de Latour-Maubourg, Paris VII^e. The first three days will be mainly devoted to presentation of 16 technical papers. On the last day participants will have a choice between plant visits or meetings with raw materials suppliers. The meeting will be presided over by Emmanuel Mayolle, president of the French Association of Soap, Detergent, and Toilet Products Manufacture.

Subjects to be presented include: "Soap Industry in Europe"; "Continuous Soap Making by the 'Monsavon' Process"; "Continuous Soap Finishing Processes" (two papers); "Raw Materials of the Soap Industry"; "Soap Changes Brought About by Thermal and Mechanical Treatments"; "Problem of Waste Waters and the Soap Industry"; "Potash Soaps"; "Industrial Soaps"; "Preserving of Soaps"; "Recent Advances in the Analysis of Soaps and Surface Active Agents"; "Evaluation of Soap and Detergent Performance on Cotton and Linen"; "Comparison of Alkaline and Neutral Wash for Wool in the Presence of Wool Grease"; "New Synthetic Detergents Based on Fat Derivatives"; "New Aspects of the Production of and Outlets for Glycerine."

For information and registration contact ITERG at the above address.

Frederick G. Lodes, head of Lodes Aerosol Consultants, Inc., New York, and treasurer of the Chemical Specialties Manufacturers Assn., shown aboard the "Queen Mary" en route to Europe late last month. Mr. Lodes attended the meeting of the Federation of European Aerosols Assn., held in Duesseldorf, Germany, April 20-27, as the official representative of CSMA. A report of his trip was made during the meeting of the Board of Governors of CSMA in Chicago, May 16.



Howard M. Packard, center, president of S. C. Johnson & Son, Inc., Racine, Wis., assists in drawing names of winners in "Going Places" contest. Mr. Packard welcomed maintenance and sanitary supply distributors who traveled last month to Racine to view the drawing. Thomas B. Martin, advertising and merchandising director of the Service Products Division, is at left, and J. W. Anderson, who does sales promotion for the division is at right.

Merle F. Koblish

Merle F. Koblish, 54, sales manager of basic industrial chemicals for General Chemical Division, Allied Chemical Corp., died May 1 from a heart attack following virus pneumonia. He had been with the division 31 years.

Harry Armitage Retires

Harry D. Armitage for the past 35 years New York district sales manager for Emery Industries, Inc., Cincinnati, retired May 1. He joined the company as its only New York salesman in 1925 when it was known as the Emery Candle Co. He is widely known in the cosmetic, chemical specialty and soap fields. Half of his time will be spent in a newly purchased home at Englewood, Florida, and the other half at the Armitage home in Barnegat Island, N. J.

Mr. Armitage was succeeded as eastern sales manager for Emery by his assistant, Robert J. Roberts, a former president of the Salesmen's Association of the American Chemical Industry. The company's eastern office is now located in Jersey City, N. J. A farewell cock-

tail party will be held for Mr. Armitage on May 19 at the Sheraton East Hotel, New York.

Pesticide Residues

Edward F. Knipling, director of entomology research for USDA's Agricultural Research Service told a symposium on agricultural chemicals at Beltsville, Md., April 27: "The importance of producing high quality foods free of hazardous residues cannot be over-emphasized". He pointed out that there was "not a single case of chronic poisoning of man proved to be caused by insecticide residues in foods."

"The overall picture of the insecticide hazard painted in popular scientific publications by some alarmists is more imaginary than real," Dr. Knipling stated and added: "This has led to more stringent laws and rigid interpretations of such laws regulating the use of insecticides and other pesticides." He asserted that this trend had created a growing problem in efforts to maintain control with existing means and to find new methods.

New Cincinnati Aerosol Loading Firm

THE first Cincinnati plant for custom and contract aerosol filling is now in operation, according to David T. Stebbins, president of the new Cincinnati Aerosol Corp.

Located at 125 Terrace Drive, the new company is the only one in the southwestern Ohio area for the loading of liquid, foam, and paste-type aerosols.

"With the continuing growth of products packed in aerosol containers, we have opened this new plant to meet the needs of manufacturers in Ohio, Kentucky, and Indiana. Our future plans call for expansion into the national field where we already serve companies who do not have the facilities for aerosol filling," Mr. Stebbins said.

The initial production facilities are capable of filling 432,000 units per week. "These will be used for insecticides, spray paints, tire cleaners, car polishes, deodorizers, hair sprays, paste products, as well as countless other products. Foods and pharmaceuticals will not be filled by this first production line due to regulations of the Food and Drug Administration. However, we expect to have the facilities for this type filling at a later date," according to Mr. Stebbins.

In addition to standard fluorinated hydrocarbon propellants, Cincinnati Aerosol Corp. is also equipped to fill with nitrogen. Standard aerosol containers, of from three to 24 ounces, as well as many bottles can be placed in the production line.

Besides the first building, Mr. Stebbins said his firm plans to lease additional warehousing space of up to 20,000 square feet, on adjacent land this summer.

The initial facilities include an unscrambling table, two synchronized fillers, purgers, and can crimpers. Other parts of the line are two synchronized gassers, a heat test tank for container leaks, and labeler. "All machinery is new and

parts of it are custom built," Stebbins said. "From the unscrambling table through the final labeling, the entire line is completely automatic."

For propellant storage, there is a 4,000 gallon bulk tank. "One tank filling supplies propellants for between 80,000 and 250,000 units, depending on customer specifications," Stebbins notes.

—★—

New Concord Products

Four new products for floor maintenance were announced recently by Concord Chemical Co., Camden 1, N. J. For floor cleaning Concord has developed a heavy duty liquid soap wax stripper, that is available with or without ammonia. This product is designed for removing deposits of old wax from all types of floors, including wood, asphalt tile, linoleum, rubber tile, vinyl, etc. Also new is a

liquid floor cleaner that contains wax and soap. The cleaner may be applied to all types of floors to remove surface and imbedded dirt. It leaves a thin film of wax which can be buffed mechanically or by hand.

A liquid synthetic detergent, "Concord Wondro" is designed for maximum soil removal and minimum removal of floor finish.

A clear, polymer type finish, "Nurez," may be applied to all types of flooring. A high degree of scuff resistance plus high gloss are claimed for "Nurez."

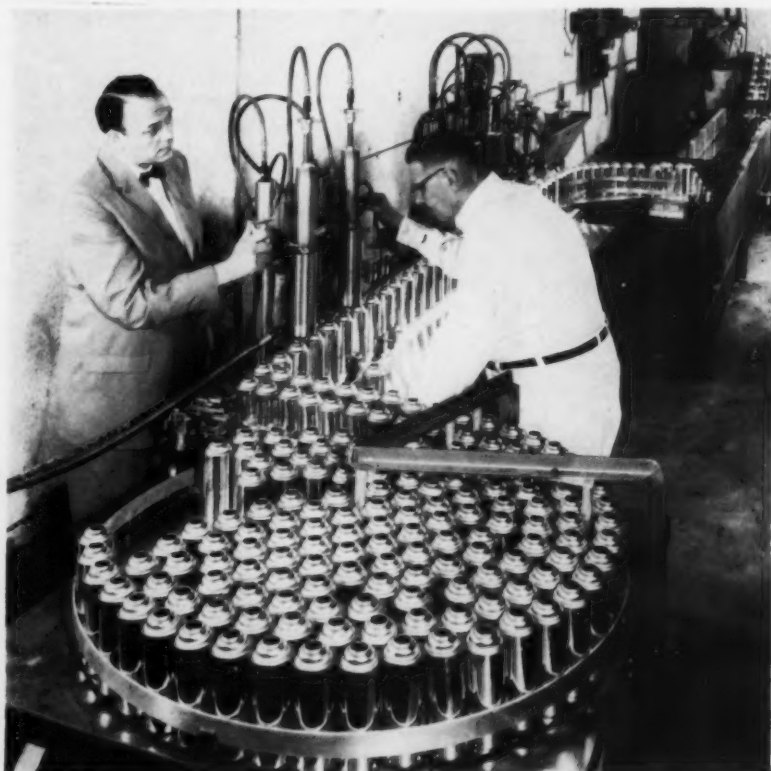
—★—

Evans to Colgate

Robert A. Evans has joined the biological research laboratory of Colgate-Palmolive Co. at Brunswick, N. J., it was announced late in April by Joseph H. Brant, Colgate director of research.

Prior to going with Colgate, Mr. Evans was associated with Armour Pharmaceutical Co. He is a graduate of Northwestern.

David T. Stebbins, left, president of Cincinnati (O.) Aerosol Co., turns valve that starts production at first aerosol custom loading plant in Cincinnati area. Plant's initial capacity is 432,000 units per week.





Felton

Imagination... integrity... experience...
absolutely the finest raw materials... these are the simple
yet overwhelmingly important reasons for Felton's successful
aromatics, specialties and fragrances
for the perfume industry. Consult us regarding your latest
product development plans.

Inc., 559 Johnson Avenue, Brooklyn 37, N.Y.
Sales offices and plants in major cities, Canada and overseas.

What's brand new?.....

You expect *more* from the leader, rightfully so. And now a new Oronite manufacturing process improves the leading detergent raw material—ALKANE—making it better than ever.

Oronite's new alkylate, ALKANE "60", eliminates some of the deficiencies of present dodecylbenzenes used in heavy duty detergents. Yet, ALKANE "60" retains the excellent sulfonation quality of ALKANE '56.

ALKANE "60" provides the user greater production economy plus superior product performance.

For complete information, contact the Oronite office nearest you.

Alkane "60" heavy duty formulations without suds boosters (left) show improved foaming in soft water compared to dodecylbenzene based products (right).



Alkane "60" based products are less irritating to the skin.





ALKANE*

ALKANE "60"

...BEST FOR THE DETERGENT MANUFACTURER

Reduced need for suds booster provides:

Real production savings

Decreased stickiness and caking

ALKANE "60"

...BEST FOR THE DETERGENT CONSUMER

Sudsing is better at lower "use-concentration"

Suds have high stability to soil

Improved cleaning, particularly for cotton laundering

Still lower degree of skin irritation

*Trademark for detergent intermediate



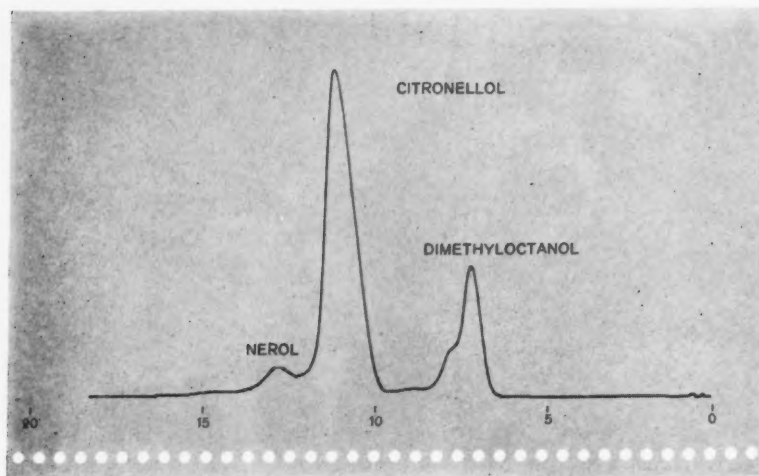
ORONITE CHEMICAL COMPANY

A CALIFORNIA CHEMICAL COMPANY SUBSIDIARY

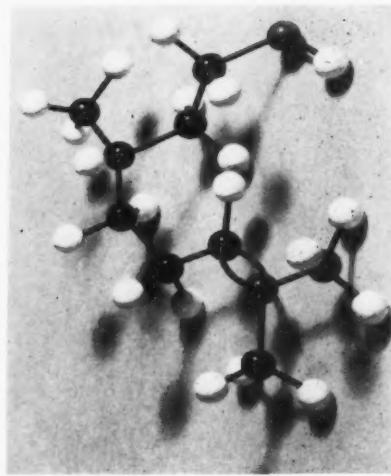
EXECUTIVE OFFICES • 200 Bush Street, San Francisco 20, California

SALES OFFICES • New York, Boston, Wilmington, Chicago, Cincinnati, Cleveland, Houston,
Los Angeles, San Francisco, Seattle

Foreign Affiliate: California Chemical International, Inc., San Francisco, Geneva, Panama



VAPOR-PHASE CHROMATOGRAPH



CITRONELLOL: 3-DIMENSIONAL MOLECULAR MODEL

STANDARDIZE YOUR PRODUCT PERFUME

with an economically controlled
CITRONELLOL GLIDDEN
distributed by Firmenich

No longer need you depend upon citronellol from natural sources, with its marked fluctuations in prices and qualities as the charts indicate. Citronellol BG and Citronellol CG are now available at practical costs, as reliable as the abundant domestic source from which they are produced. And they provide a controlled, uniform degree of purity that the natural product cannot approach.

Send for further information and quantities suitable for study in your own products.



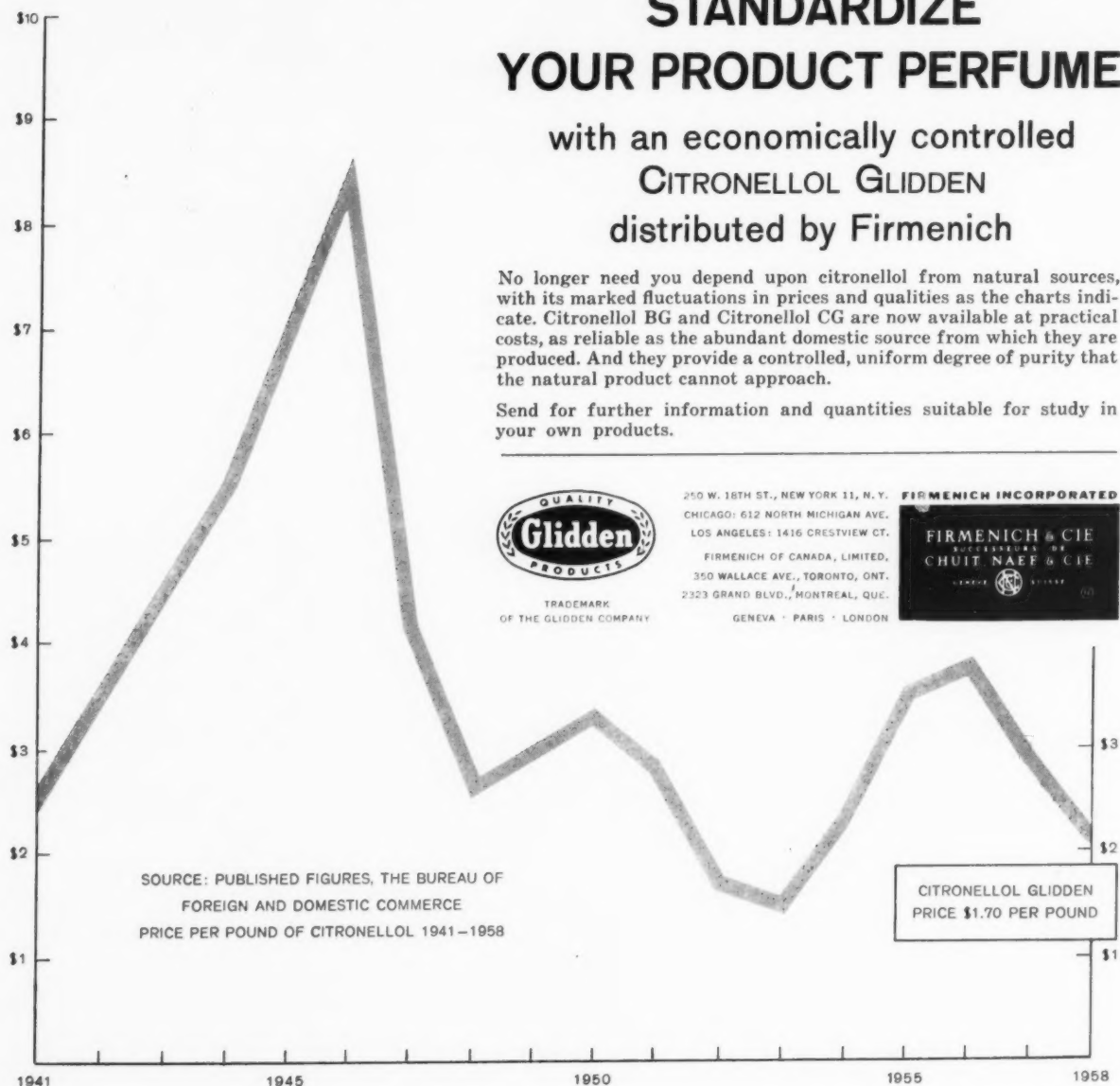
TRADEMARK
OF THE GLIDDEN COMPANY

250 W. 16TH ST., NEW YORK 11, N. Y.
CHICAGO: 612 NORTH MICHIGAN AVE.
LOS ANGELES: 1416 CRESTVIEW CT.
FIRMENICH OF CANADA, LIMITED,
350 WALLACE AVE., TORONTO, ONT.
2323 GRAND BLVD., MONTREAL, QUE.

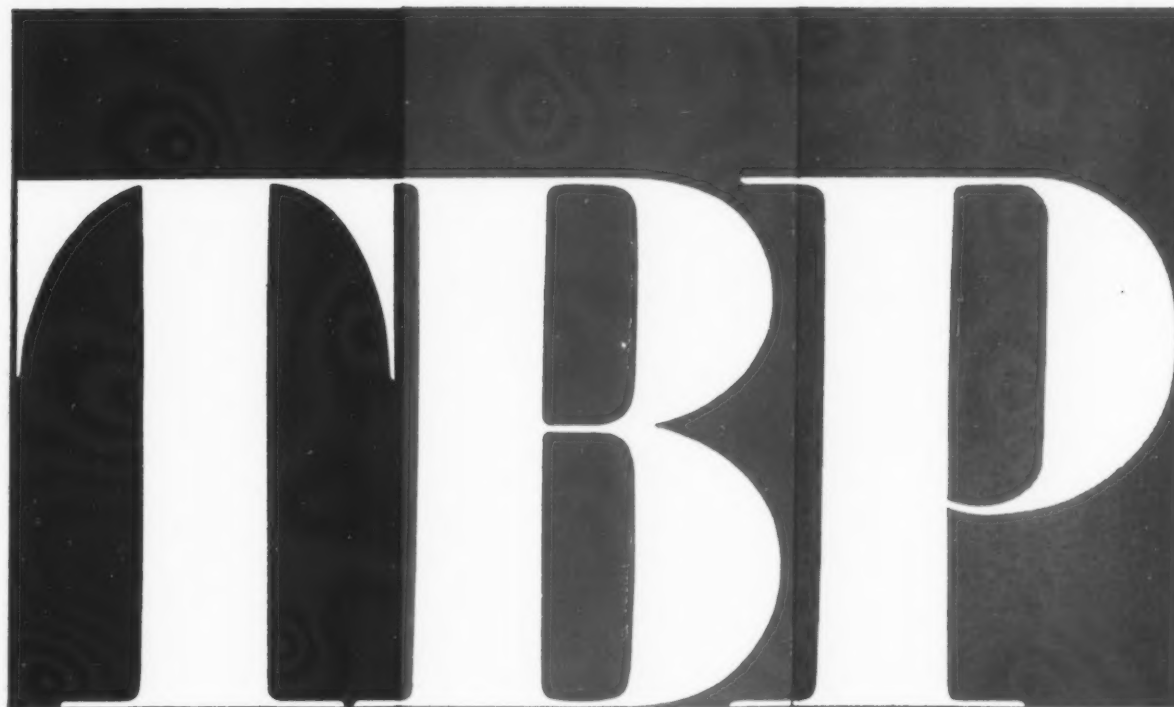
GENEVA • PARIS • LONDON

FIRMENICH INCORPORATED

FIRMENICH & CIE
SUCCESSORS OF
CHUIT, NAEF & CIE



SOAP and CHEMICAL SPECIALTIES



TRIBUTYL PHOSPHATE

1. SOLVENT EXTRACTION OF METAL IONS

TBP provides extensive application for solvent extraction of metals and rare earths in the form of their nitrate salts. This is particularly true for metals associated with the atomic energy processes, beginning with the initial preparation of the ores and on to the recovery of the metals from spent reactor fuels.

2. OUTSTANDING ANTI-FOAM AGENT

Tributyl Phosphate leads the field in the control of foam during the manufacture, can-filling, and final application of synthetic latex emulsion paints. TBP is preferred, too, for paper coatings, water adhesives, casein solutions, inks, textile sizings and detergent solutions. Tributyl Phosphate offers exceptional cost-efficiency value and minimal residual odor.

3. SUPERIOR HEAT EXCHANGE MEDIUM

As a fluid heat exchange medium, Tributyl Phosphate is notable for being useful over such a wide range of temperature. When compared with

aqueous solutions and halogenated compound, TBP offers many unique advantages. It is non-corrosive, non-flammable, non-volatile and is of a low order of toxicity.

TBP Can Help You! Mail Coupon!

INDUSTRIAL CHEMICALS DEPT.
COMMERCIAL SOLVENTS CORP.
260 MADISON AVE.
NEW YORK 16, N. Y.

Please send me additional information on Tributyl Phosphate with regard to its use in:

- ☐ solvent extraction.
☐ foam reduction.
☐ heat exchange use.

Name _____

Title _____

Company _____

Street _____

City _____ Zone _____ State _____

INDUSTRIAL CHEMICALS DEPARTMENT

COMMERCIAL SOLVENTS CORPORATION

260 MADISON AVE., NEW YORK 16, N. Y.

Atlanta • Boston • Chicago • Cincinnati • Cleveland • Detroit • Kansas City
Los Angeles • New Orleans • Newark • New York • St. Louis • San Francisco

IN CANADA: McArthur Chemical Co. (1958) Ltd., Montreal • IN MEXICO: Comsolmex, S. A., Mexico 7, D. F.

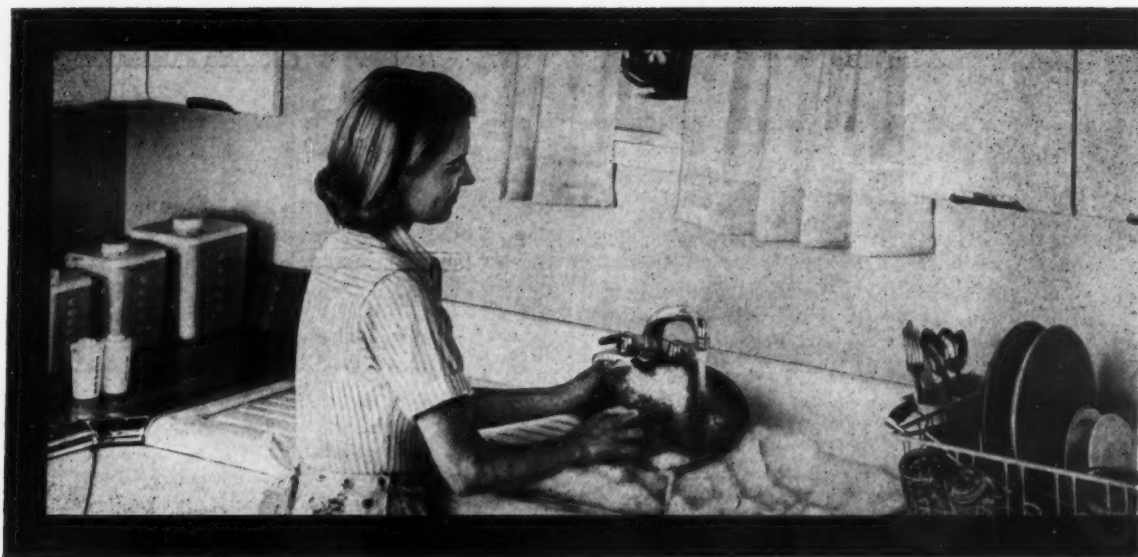


In Detergents . . . Light, Heavy, Liquid or Dry . . . You'll Find

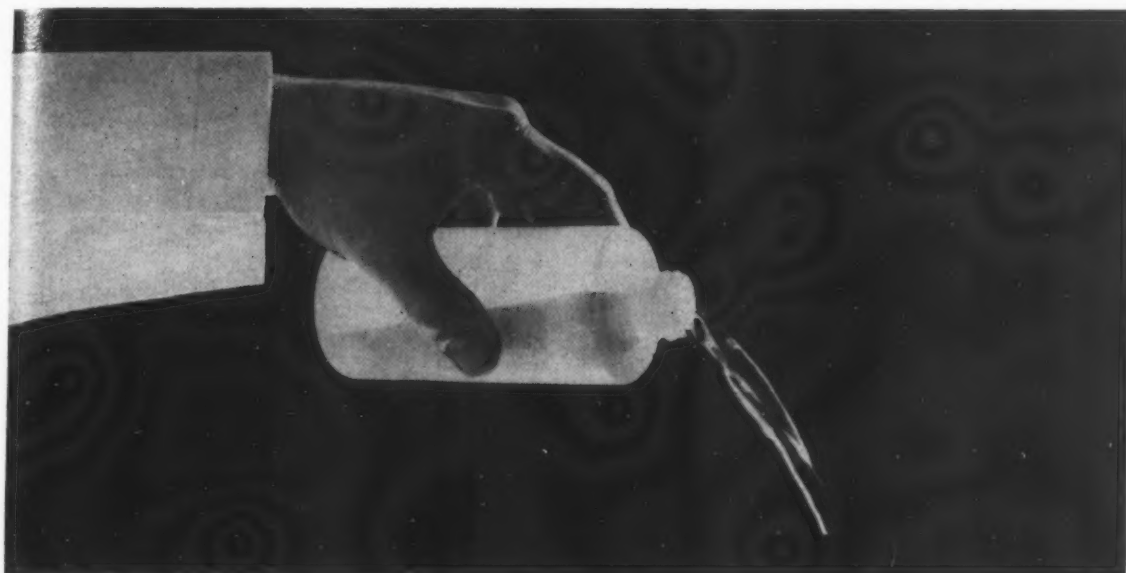
ULTRA CHEMICALS AT WORK



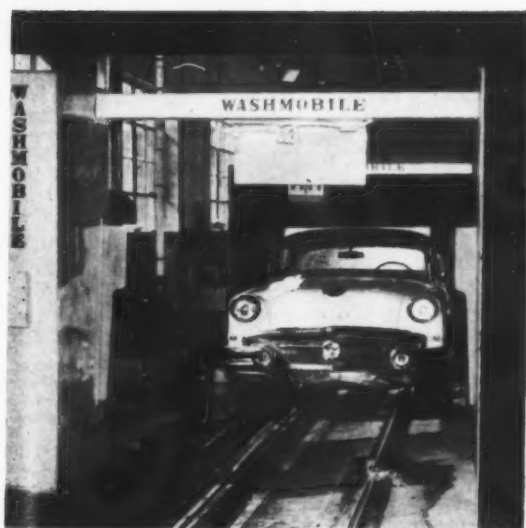
LIQUID DETERGENTS STAY SPARKLING CLEAR when you depress cloud points with Ultra hydrotropes. Acting as coupling agents and solubilizers, these hydrotropes allow easier formulation of heavy-duty detergents. Light-duty liquid detergents formulated with Ultra hydrotropes won't cloud up on store or consumer shelves. In both light- and heavy-duty detergents, these products permit higher concentrations of active ingredients.



SPECIALIZED CLEANING TASKS DEPEND ON DETERGENT VERSATILITY. Ultra supplies outstanding, quality-tested detergent bases to meet your exact detergent requirements. As starting points for finished detergents, these quality products combine maximum economy with easy processing. They offer optimum characteristics for formulating specialty cleaning compounds both for industrial and institutional use. Ultra products are also outstanding in the textile and paper industries, and in concrete and cinder block manufacture, where they act as air-entrainment agents.



HOUSEHOLD CHORES ARE EASIER with today's harder-working liquid detergents and Ultra's super-amides give them longer-lasting foams with improved performance. Ultrapole® LDA is particularly useful as a foam stabilizer and viscosity modifier in dish-detergents. And, in cosmetics and shampoos, Ultra's alkanolamine condensates are ideal thickening agents and foam stabilizers.



Divisions of Witco Chemical Company:



ULTRA CHEMICAL WORKS

Sodium and other Salts of Xylene and Toluene Sulfonic Acids (Hydro-tropes) • Foam Builders and Stabilizers • Alkyl Aryl Sulfonates



ORGANIC CHEMICALS DIVISION

Metallic Stearates • Resins for Urethane Foams • Paint Driers • Emcol Emulsifiers for Agriculture, Industry, Food, Cosmetics • Phthalic Anhydride • Vinyl Stabilizers



RUBBER CHEMICALS DIVISION

Carbon Blacks • Rubber Plasticizers, Accelerators, Anti-Sunchecking Wax



PIONEER PRODUCTS DIVISION

Asphaltic Compounds for Storage Tank Insulation and Vapor-Sealing • Witcolite Insulation for Underground Piping



SODEN CHEMICALS DIVISION OF

WITCO CHEMICAL CO., CANADA, LTD.

Carries the complete line of Witco Chemicals in Canada

ULTRA CHEMICAL WORKS, Inc.

SCS-5

2 Wood Street, Paterson, N. J.

Please send me information on the following products:

I am interested in the following applications:

Name _____

Company _____

Address _____

City _____ Zone _____ State _____

ETHANOLAMINES

for soap, detergents and chemical specialties

Allied's Mono-, Di-, and Triethanolamines are manufactured by an improved process which assures their high quality and purity for use in:

SOAPS AND DETERGENTS The Ethanolamines are important ingredients in many soaps and detergents for household and industrial use. They form excellent suds boosters which function in cold hard water to produce foam of improved stability.

FATS, OILS AND WAXES The Ethanolamines are excellent components of emulsified fatty acid preparations. They react producing soaps which are practically neutral, having a pH in the range of 8, and which are soluble in both water and hydrocarbons. Highly stable oil-in-water emulsions such as boring oils and cutting oils can be prepared which are characterized by small particle size, ease of preparation, and non-corrosiveness.

COSMETICS AND TOILETRIES Triethanolamine Stearate is used in many cosmetic preparations. Its freedom from irritating skin effects makes it especially advantageous. Triethanolamine and Monoethanolamine fatty acid esters are used as dispersing agents in the formulation of shaving creams, hair tonics, shampoos and other preparations of this nature.

POLISHES Monoethanolamine and Triethanolamine are used as the emulsifying agents in the preparation of all types of wax polishes for automobiles, furniture, floors, shoes and metals... as well as in various **DISINFECTANT**, **TEXTILE SCOURING**, **INSECTICIDE**, **HERBICIDE** AND **DRY CLEANING** formulations.

(SEE SPECIFICATIONS CHART ATTACHED)
For further technical data, and for information on price and delivery, write us at address listed below.

SHIPPING STANDARDS — ALLIED TECHNICAL ETHANOLAMINES

Specific Gravity 20/20°C
Boiling Range — ASTM
Color — APHA
Suspended Matter
Equivalent Weight
Odor
Water
MEA Content
DEA Content
TEA Content
Iron

	monoethanolamine	diethanolamine	triethanolamine	
			Commercial Grade	98% Grade
Specific Gravity 20/20°C	1.017-1.021	1.090-1.095*	1.1220-1.1300	1.1240-1.1290
Boiling Range — ASTM	I.B.P. 165°C min. D.P. 175° max.	— —	— —	— —
Color — APHA	20 max.	40 max.	100 max.	100 max.
Suspended Matter	Substantially Free	Substantially Free	Substantially Free	Substantially Free
Equivalent Weight	61-63	104-106	140-145	147-152
Odor	Mildly ammoniacal	—	Mildly ammoniacal	Mildly ammoniacal
Water	—	0.15 wt. % max.	0.5 wt. % max.	0.5 wt. % max.
MEA Content	—	1.0 wt. % max.	1.5 wt. % max.	—
DEA Content	—	98.50 wt. % min.	15.0 wt. % max.	—
TEA Content	—	1.0 wt. % max.	85.0 wt. % min.	98.0 wt. % min.
Iron	—	—	—	0.003 wt. % max.
		*30/20°C		



NITROGEN DIVISION

Dept. EA 6-27-5, 40 Rector Street, New York 6, N. Y.

The first meaningful color stability specifications for fatty acids

	Lovibond Color—5¼" Cell-Y/R Max.		
	Original Color Spec.	Color Stability Specification	Typical Color Stability
EMERSOL OLEIC ACIDS			
233 LL (low-linoleic)	3.0/0.5	10.0/3.0	7.0/2.5
221 Low Titer White Elaine	5.0/0.5	20.0/7.0	15.0/5.0
EMERSOL STEARIC ACIDS			
132 Lily (T.P.)	1.0/0.3	4.0/1.8	2.0/1.3
120 (D.P.)	1.5/0.5	7.0/2.0	4.5/1.5
140 Palmitic	1.0/0.3	6.0/2.0	3.0/1.5
150 High Stearic	1.0/0.3	6.0/2.0	3.0/1.5

These new Emery specifications are meaningful because they are based on the new A.O.C.S. standard test method, the first *reproducible* color stability test. Essentially, method L15a-58 subjects samples to 205°C under a blanket of nitrogen . . . stearic acids for 2 hours and oleic acids for 1 hour.

Thanks to this test, you can now compare color stabilities accurately and confirm positively the superior quality of Emersol Stearic and Oleic Acids.

Try them in your product and you will see the difference. For a comparison of these specifications in Lovibond, Photometric Index and Gardner color systems, write Dept. S-5 for a copy of Technical Bulletin No. 222.

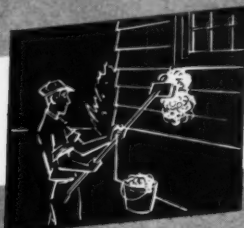
Emersol® Fatty Acids



Fatty Acid Sales Department

Emery Industries, Inc., Carew Tower, Cincinnati 2, Ohio—Vopcolene Division, Los Angeles
Emery Industries (Canada) Ltd., London, Ontario—Export Department, Cincinnati

for better liquid detergent products
choose one of these
Nacconol® twins!



full bodied Nacconol 60 S
free flowing Nacconol SL

A wide variety of shampoos, bubble baths, car washes and other household and industrial cleaners look better and are better when they're based on one of these alkyl aryl sulfonates.

NACCONOL SL has 35% active organic content. For a more concentrated, 60% solids material, NACCONOL 60S is recommended.

Both are homogeneous liquids with pale yellow color and clean, fresh smell. Both will remain clear and pourable even below 32°F. They offer exceptional foaming, wetting and detergent action, are stable to strongly acid or alkaline aqueous solutions and are compatible with anionic and non-ionic materials.

Samples and additional data on all 12 forms of NACCONOL are available on request.

OTHER FORMS OF NACCONOL

Nacconol NR
Nacconol DBX

Nacconol DB
Nacconol HB

Nacconol Neads
Nacconol NRSF
Nacconol Z

Nacconol FSNQ
Nacconol SX
Nacconol SW

NATIONAL ANILINE DIVISION

40 RECTOR STREET, NEW YORK 6, N. Y.

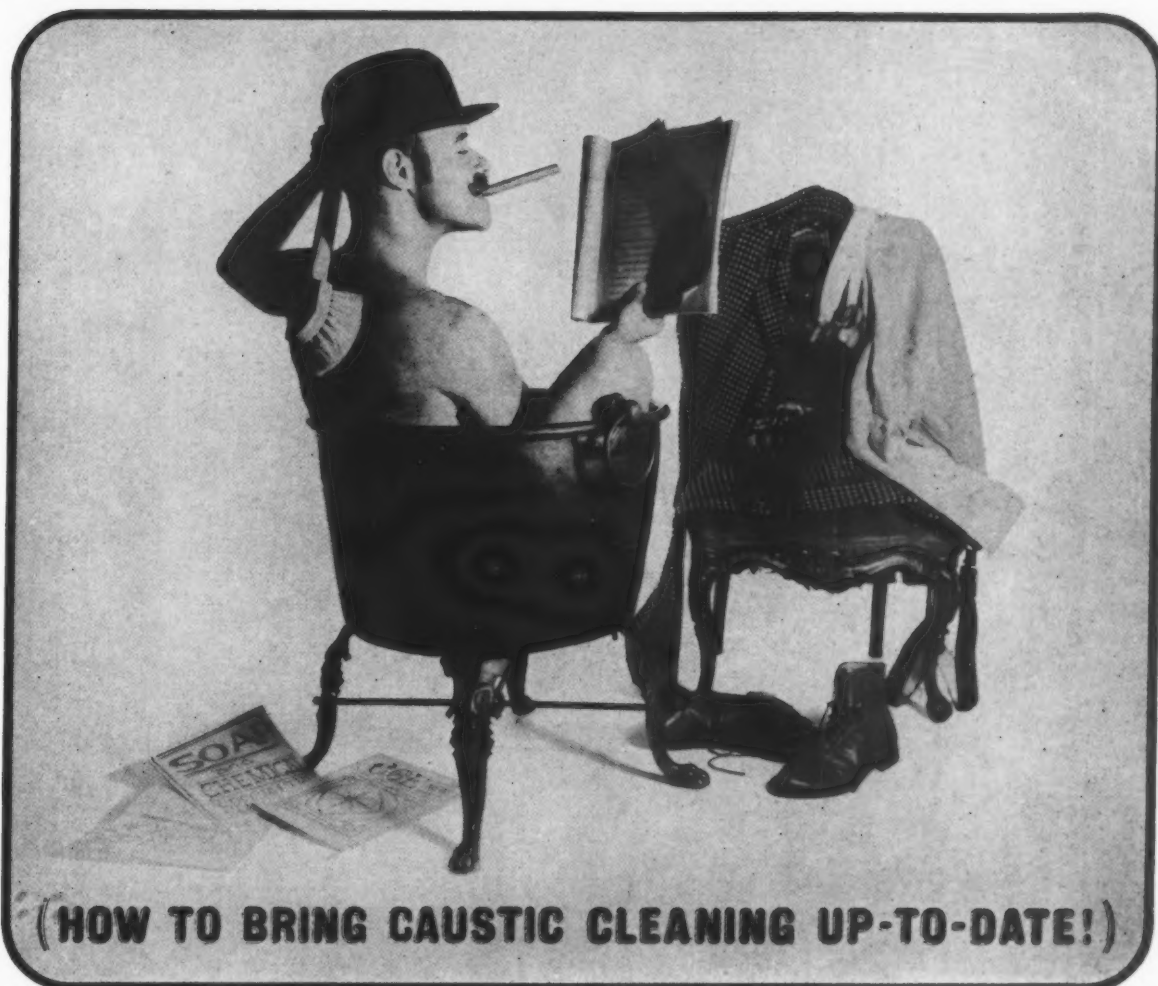
Atlanta Boston Charlotte Chicago Greensboro Los Angeles
Philadelphia Portland, Ore. Providence San Francisco

In Canada: ALLIED CHEMICAL CANADA, LTD., 100 North Queen St., Toronto 12

Distributors throughout the world. For information:

ALLIED CHEMICAL INTERNATIONAL • 40 Rector St., New York 6, N. Y.

**Allied
Chemical**



Add Pfizer Gluconates to get better results, greater efficiency from the caustic cleaning formulations you offer.

FOR BOTTLE WASHING—the inclusion of Pfizer Gluconates in your formula gives your bottling customer a washing compound that gets bottles sparkling clean — free of haze and rust spots that could mar their appearance. Pfizer Gluconates also provide for more efficient aluminum label removal and prevent the development of rust and scale on equipment.

FOR STRIPPING PAINT FROM STEEL—Pfizer Gluconates improve the efficiency of caustic paint stripping compounds. They increase the rate of paint film removal and permit free rinsing of the paint-stripped metal. In addition, Pfizer Gluconates eliminate the usual after-film of iron oxide.

FOR ALUMINUM ETCHING—Pfizer Gluconates in aluminum etching compounds prevent the formation of hard, adherent scale. Efficient and economical, too, because you use very little gluconate in the compounds, yet assure an even, uniform etch!

FOR RUST REMOVAL—Outstanding caustic rust removal compounds are possible with Pfizer Gluconates. Besides dissolving rust efficiently, the presence of gluconates will retard after-rust and prolong the life of the bath. Also, a small amount of gluconate added to standard alkaline cleaning compounds helps in the removal of light rust films.

Pfizer Gluconates have a proven record of stability in caustic com-

pounds, both in storage and in use. Be sure your caustic formulation line is complete. Write to Pfizer for technical data and use-level information on Sodium Gluconate and Gluconic Acid.

- ☐ Please send me Technical * Bulletin 102 "Pfizer Products for Chemical Cleaning".
- ☐ Data Sheet 549 Aluminum Etching Information.

Name _____

Title _____ Company _____

Address _____

City _____ State _____

Science for the world's well-being

Manufacturing Chemists
for over 100 years

Pfizer

Chas. Pfizer & Co., Inc., Chemical Sales Division, 630 Flushing Ave., Brooklyn 6, N. Y.

Branch Offices: Clifton, N. J.; Chicago, Ill.; San Francisco, Calif.; Vernon, Calif.; Atlanta, Ga.; Dallas, Tex.; Montreal, Canada



Wash-day Magic starts with Quality Raw Materials like

ENJAY OLEFINS

Syndet manufacturers need look no further than their nearest Enjay office for all their raw material needs. Materials for light or heavy duty detergents, powdered or liquid. Wetting agents, emulsifiers, sanitizers, or foam control agents - Enjay has the products you need.

For example, the versatile Enjay Olefins, Tetrapropylene and Tripropylene and Nonene fulfill many rigid requirements as raw materials for anionic and nonionic detergents.

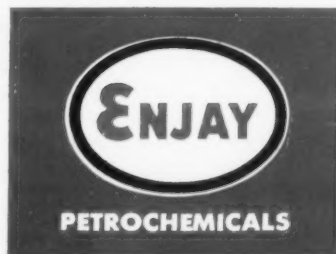
Enjay supplies these low cost products in large volume to the detergent industry. Enjay also markets other surfactant raw materials - OXO Alcohols - Isooctyl, Decyl and Tridecyl - Isopropyl Alcohol, Ethyl Alcohol and Benzene.

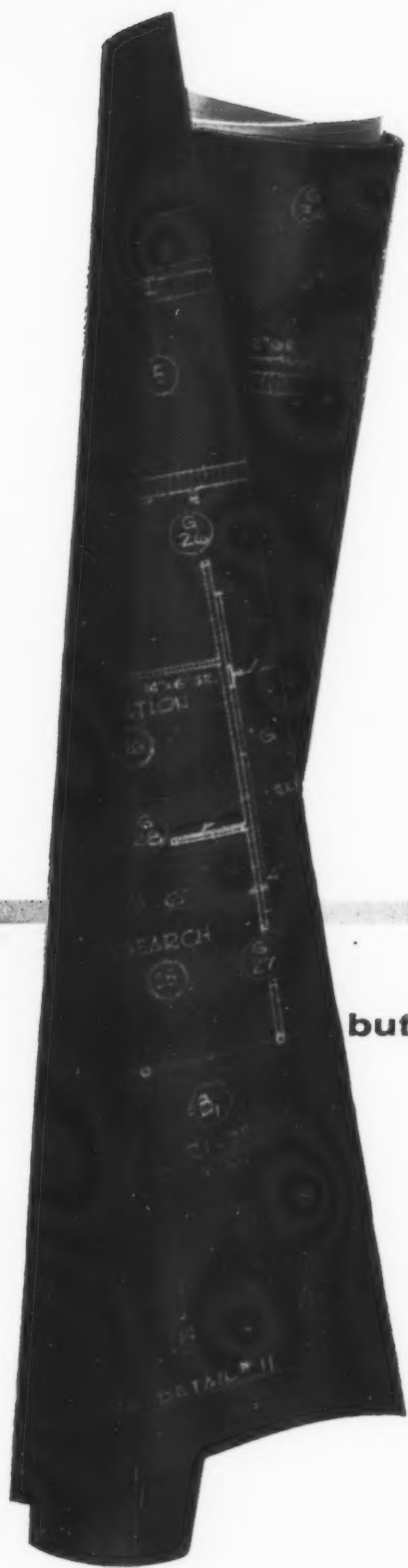
EXCITING NEW PRODUCTS THROUGH PETRO-CHEMISTRY

ENJAY COMPANY, INC., 15 West 51st St., New York 19, N.Y.

Akron • Boston • Charlotte • Chicago • Detroit • Los Angeles • New Orleans • Tulsa

For more information, technical assistance, or to order any surfactant raw material, phone or write your nearest Enjay office.





NOT MUCH NOISE FROM *Norda*

but...

Quietly, we've been going ahead with important improvements, and with expansion of our facilities to serve you better than ever.

For instance, Norda recently spent over a quarter-million dollars on plant modernization, including new machinery and storage tanks, at our Hanover, New Jersey plant.

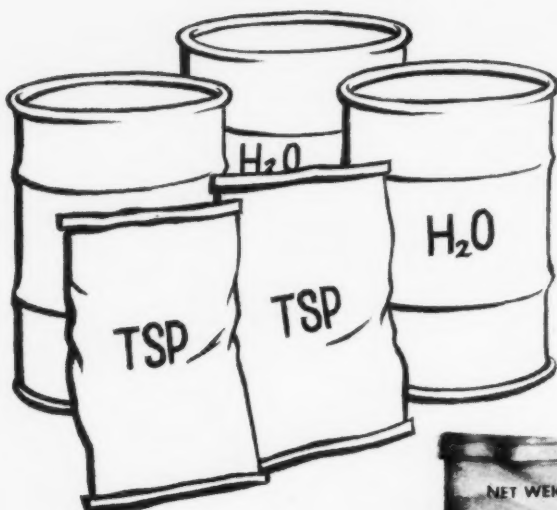
Constant progress like this explains, in part, the confidence and trust so many place in Norda for the finest flavors, aromatic chemicals, and essential oils.

Norda makes good scents

Norda®



NORDA, 601 W. 26th St., N. Y. 1, N. Y. • Chicago • Los Angeles • San Francisco • Toronto • Montreal • Havana • London • Paris • Grasse • Mexico City



Why pay
to ship
this?

**THIS CUTS
YOUR
FREIGHT BILLS
56%**



...and costs less, too!

That's right! Trisodium phosphate crystals are 57% water... practically three-fifths waste weight you pay to ship!

On the other hand, if you can substitute FMC TSP Anhydrous...

- Shipping costs are more than cut in half!
- Material costs are lower, too. You save \$1.34 per cwt on an active-ingredient basis!

- 7 ounces of FMC TSP Anhydrous does the work of a pound of crystals!

- You handle and store less material!

- FMC TSP Anhydrous cakes less and flows more freely!

If you'd like to reduce your costs and gain these other advantages, we'll gladly help you make the change. Call us today!

SODIUM PHOSPHATES Hexaphos® Fosfodril® Sodaphos® (Brands of Sodium Glassy Phosphate) Disodium Phosphate Trisodium Phosphate Monohydrate Trisodium Phosphate Hemihydrate Monosodium Phosphate Trisodium Phosphate Anhydrous Sodium Acid Pyrophosphate Sodium Tripolyphosphate Tetrasodium Pyrophosphate Tetrasodium Pyrophosphate Crystals

POTASSIUM PHOSPHATES Dipotassium Phosphate Potassium Tripolyphosphate Monopotassium Phosphate Tripotassium Phosphate Tetrapotassium Pyrophosphate



Putting Ideas to Work

FOOD MACHINERY AND CHEMICAL CORPORATION

Mineral Products Division

General Sales Offices:

161 E. 42nd STREET, NEW YORK 17



SCENTS



PFW

POLAK'S FRUTAL WORKS INC., MIDDLETOWN, N.Y.
AMERSFOORT, HOLLAND · PARIS, FRANCE · BREMEN, GERMANY · BRUSSELS, BELGIUM · SOFLOR LTD. · PERIVALE, ENGLAND

Over 6,300 JOBBERS of

SANITARY CHEMICALS CLEANING SUPPLIES MAINTENANCE EQUIPMENT

**would read your advertising
every month if it appeared in**

Maintenance - Sanitary Supplies

Member **BPA**

MAINTENANCE-SANITARY SUPPLIES gives the fullest coverage of the jobber market yet offered, including the following: (1) sanitary supply jobbers, (2) janitor supply houses, (3) paper jobbers, (4) school supply jobbers, (5) hotel supply firms, (6) bar, restaurant and club suppliers, (7) cleaning and maintenance contractors with jobbing departments.

MAINTENANCE-SANITARY SUPPLIES is pub-

lished by an organization which has "lived with" the sanitary and janitor supply trades for over thirty years. Its controlled circulation assures full coverage of the jobber market every month. Through its jobber salesmen, M-SS is a main sales artery between the manufacturer and industrial consumer. Every monthly issue goes to more than 6,300 separate jobbing and distributing firms.

Published by

MAC NAIR-DORLAND COMPANY

254 West 31st St., New York 1, N. Y.

Also publishers of

"SOAP & CHEMICAL SPECIALTIES" AND THE ANNUAL "SOAP BLUE BOOK"

SANDOZ OFFERS customer tailor-made formulating services and customer technical services

through SANDOZ Laboratory Facilities. Whether you need an entirely new formulation or a re-formulation, SANDOZ outstanding chemicals, SURFACTANTS, OPTICAL BRIGHTENERS, CATIONIC PRODUCTS, and SPECIALTY PRODUCTS, Dispersing Agents, Water Repellents, Anti-static Agents, can help YOU.

SANDOZ has been a manufacturer and source of supply for outstanding organic chemicals for more than forty years in the United States; in Europe, for close to seventy-five years. Today, SANDOZ products and service are well known in fifty-nine countries and territories throughout the world.

The important question: How can SANDOZ be of service to you? With laboratory assistance?

Technical advice? Quality raw materials? Just write, wire, or 'phone: SANDOZ, INC.,

61-63 Van Dam St., New York 13, N. Y.

District offices: Charlotte, Cincinnati, Fair Lawn, N. J., Hudson, Mass., Los Angeles, Philadelphia.



SANDOZ

THINKS AHEAD WITH CHEMICALS



NEW THIRD EDITION

HANDBOOK OF PEST CONTROL

By Arnold Mallis

THIS newest reference book deals primarily with household and industrial pests—, insects, rodents, etc., their life cycles, habits, identification and latest chemicals, methods and techniques for their control. It is the most complete work of its kind offered in a single volume.

This up-to-the-minute book should be in the library of every pest control operator, insecticide manufacturer and marketer, entomologist,

chemist and others interested in pest control chemicals.

It is recommended by educators as a text book in various college courses in entomology.

The HANDBOOK OF PEST CONTROL measures six by nine inches, has a sturdy grey cloth binding, gold stamped. It comprises 26 chapters for a total of 1132 pages, printed on glossy, high-finish paper.

TABLE OF CONTENTS

Rats and mice

Silverfish

Springtails

Cockroaches

Earwigs

Termites

Decay fungi

Wood-boring, book-boring
and related beetles

Psocids

Bedbugs and other bugs

Clothes moths

Household fumigation

Hide and carpet beetles

Bees and wasps

Stored product pests

Spider or ptinid beetles

Lice

Fleas

Flies and mosquitos

Spiders

Mites and ticks

Miscellaneous household pests and chemicals used in their control

1132 PAGES — OVER 250 ILLUSTRATIONS

MAC NAIR-DORLAND CO.

254 W. 31st Street

New York 1, N. Y.

\$12.50 in U.S.A.*

\$13.00 elsewhere.

Enclosed is our check for \$..... for a postpaid copy of **Handbook of Pest Control**.
It is understood we may return the book within ten days for a full refund if not satisfied.

Company

Address

State Name

*Add 3% sales tax if in New York City

(Check must accompany order)

850

HARD WATER

PPM

TOLERANCE

INTEXSAN

7212

a new, economical quaternary ammonium blend
approved and proven
for use in waters up
to 850 ppm hardness.

Write, telephone
or wire today for
further details.

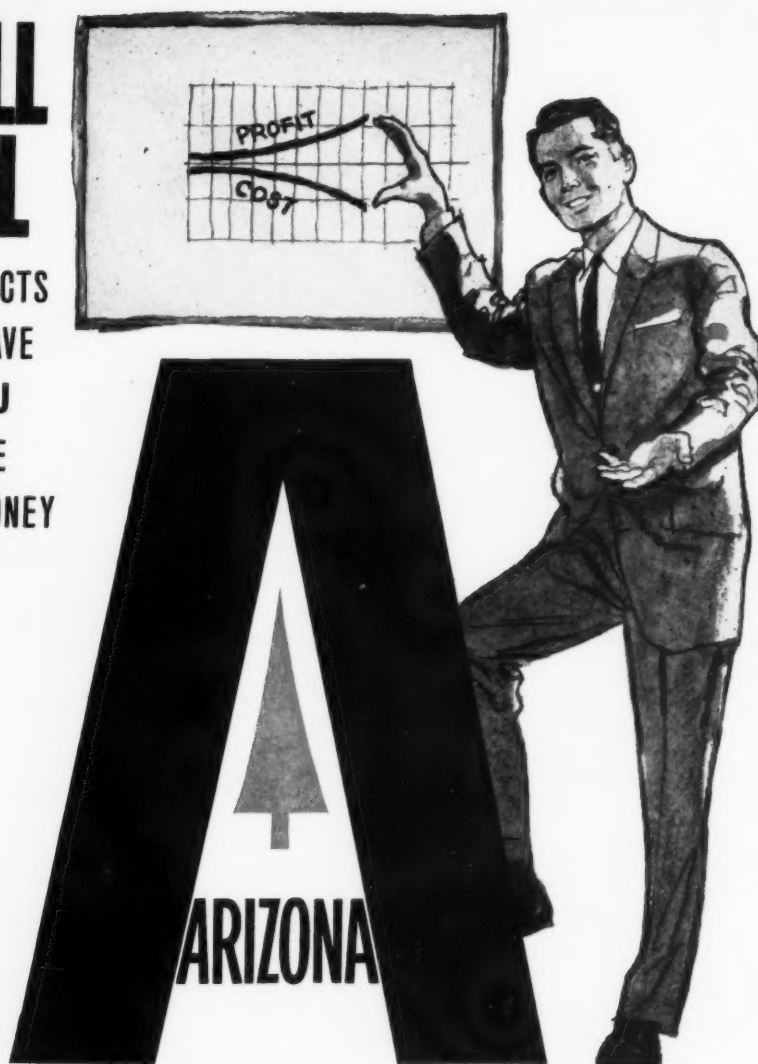
INTEX

Chemical Corporation

LODI, NEW JERSEY

MANUFACTURERS OF INDUSTRIAL CHEMICALS

UNIFORM
**TALL
OIL**
PRODUCTS
TO SAVE
YOU
TIME
AND MONEY



Arizona tall oil products never vary...are constantly high in quality. This strict insistence on uniformity saves you time and money in your soapmaking operations. Eliminates adjustment of formulations, keeps your processes constant, the quality of your product consistent. Next time you need tall oil products, do what so many leaders in the soap industry do: contact Arizona.

ARIZONA CHEMICAL COMPANY

30 ROCKEFELLER PLAZA, NEW YORK 20, N. Y.

DISTRIBUTORS: A. J. Lynch & Company, Los Angeles, Alameda • Charles Albert Smith Ltd., Toronto, Montreal, Vancouver • T. G. Cooper & Company, Inc., Philadelphia • Farac Oil and Chemical Company, Chicago • George E. Moser & Son, Inc., Detroit • Donald McKay Smith Company, Cleveland • Thompson-Hayward Chemical Company, Houston and New Orleans • Van Waters & Rogers, Inc., Dallas • N. S. Wilson & Sons, Boston • M. J. Daly Company, Ludlow, Ky. • Great Western Chemical Company, Seattle, Spokane, and Portland (Oregon) • Welch, Holme & Clark Company, Inc., New York • Whitaker Oil Co., Atlanta, Georgia

ACINTOL® Products:

ACINTOL D and ACINTOL DLR Special Distilled Tall Oil • ACINTOL FA 1, FA 1 Special and FA 2 Tall Oil Fatty Acids • ACINTOL R Tall Oil Rosin • ACINTOL P Tall Oil Pitch • ACINTENE® Terpenes

Miranol

amphoterics

surfactants*

*U. S. and Foreign Patents

MIRANOL CM CONC.

(Coconut Monocarboxylic Derivative)
For liquid heavy duty household and industrial cleaners, liquid steam cleaning compounds, white wall tire cleaners, etc.

MIRANOL C2M CONC.

(Coconut Dicarboxylic Derivative)
Uses . . . shampoos, creams, lotions, topical applications, heaviest duty liquid cleaning compounds, liquid household laundry compounds. Partly interchangeable with Miranol CM CONC.

MIRANOL L2M-SF CONC.

(Linoleic Derivative)
Detergent capable of holding alkalies and electrolytes in emulsions such as cleaning waxes. Does not readily re-dissolve.

MIRANOL SM CONC.

(Capric Derivative)
For medical shampoos, on location rug shampoos, germicidal hand soaps and soap detergent combinations. Polymerization reducing properties of all Miranol surfactants.

MIRANOL DM

(Stearic Derivative)
Low priced fabric softener and hair conditioner.

MIRANOL HM CONC.

(Lauric Derivative)
For applications where a pure lauric derivative is basic requirement. Interchangeable with Miranol CM and C2M CONC.

MIRANOL JEM CONC.

(Octoic Derivative)
Stable caustic soda wetting agent used in dairy cleaners, bottle washing, food peeling, alkaline degreasing, mercerization, kier boiling, etc.

MIRANOL MSA MODIFIED

(Amphoteric Salt)
Interchangeable with Miranol 2MCA Modified.

MIRANOL OM-SF CONC.

(Oleic Derivative)
For low priced high viscosity cleaning formulations, non absorbency build-up preventive in cationic home laundry softeners.

MIRANOL 2MCA MODIFIED

(Amphoteric Salt)
Non-irritating to skin and eyes and non-eye-stinging shampoo base, also for impregnating paper and paper fabric for skin and body wash, etc.

Outstanding in versatility and performance, MIRANOL amphoteric surface active agents have an extremely wide range of uses.

The MIRANOL AMPHOTERICS consist of a large group of surfactants, some of which differ primarily in their fatty acid radical and others which represent modifications through intricate chemical reactions.

The MIRANOL surface active agents are the ONLY ionically balanced amphoteric surfactants known. Each derivative has particular advantages to offer for specific uses.

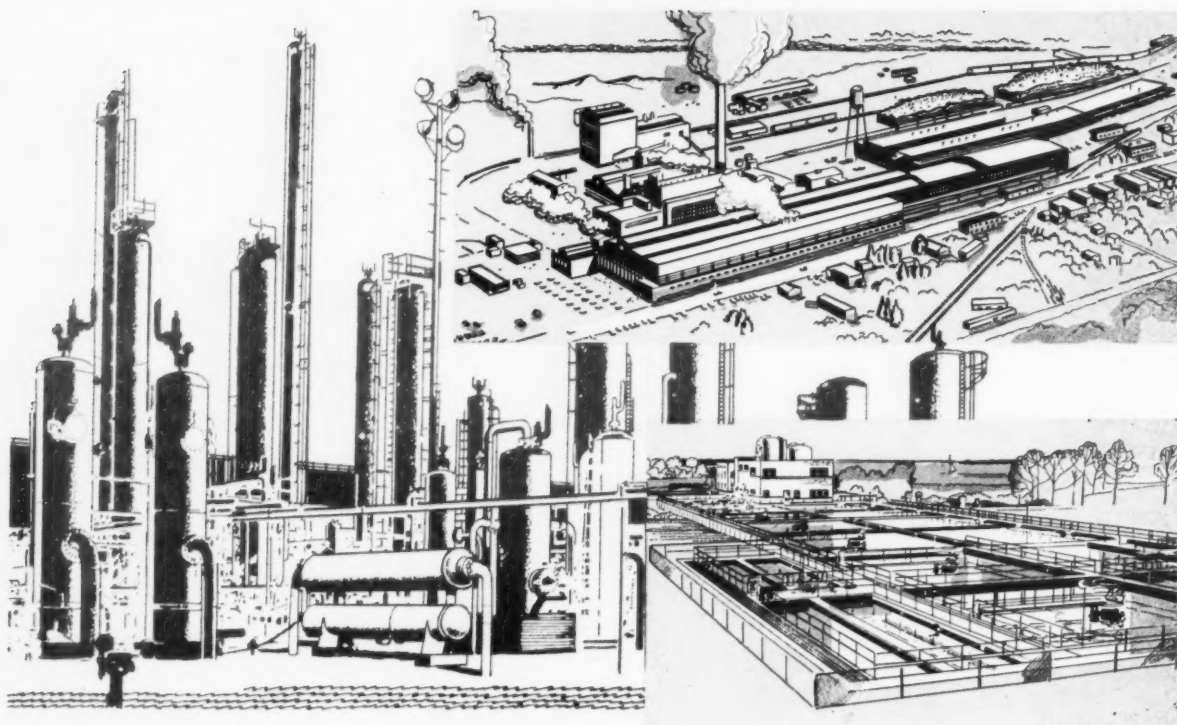
CHECK THESE IMPORTANT PROPERTIES . . .

- STABILITY OVER THE ENTIRE pH RANGE
- TOLERANCE FOR ALKALIES AND/OR ELECTROLYTES UP TO 50% (for liquid heavy duty compounds).
- FULLY COMPATIBLE WITH ALL ANIONIC, CATIONIC AND NON-IONIC AGENTS IN EVERY PROPORTION
- TREMENDOUS FOAMING POWER AND FOAM STABILITY
- COMPLETE FOAM STABILITY IN PRESENCE OF SOAP AND SOAP FOAM
- COMPLETELY NON-IRRITATING TO SKIN AND EYES
- EXCELLENT SEQUESTRATION PROPERTIES
- EXCELLENT EMULSIFYING PROPERTIES
- COMPATIBLE WITH QUATERNARY GERMICIDES

THE MIRANOL CHEMICAL COMPANY, INC.
275 COIT STREET, IRVINGTON, N. J.

Tel. ESsex 4-2500

A Dependable Source OF INDUSTRIAL CHEMICALS



Manufacturers and Marketers of

CHLORINE

(Tank-Car Quantities, One-Ton Containers)
(OR 150 Lb. Cylinders)

50% - 73% CAUSTIC SODA

(Tank-Car Or Tank-Truck Quantities)

HYDROCHLORIC ACID

(Tank-Car OR Tank-Truck Quantities)

Plant:
PINE BLUFF, ARK.

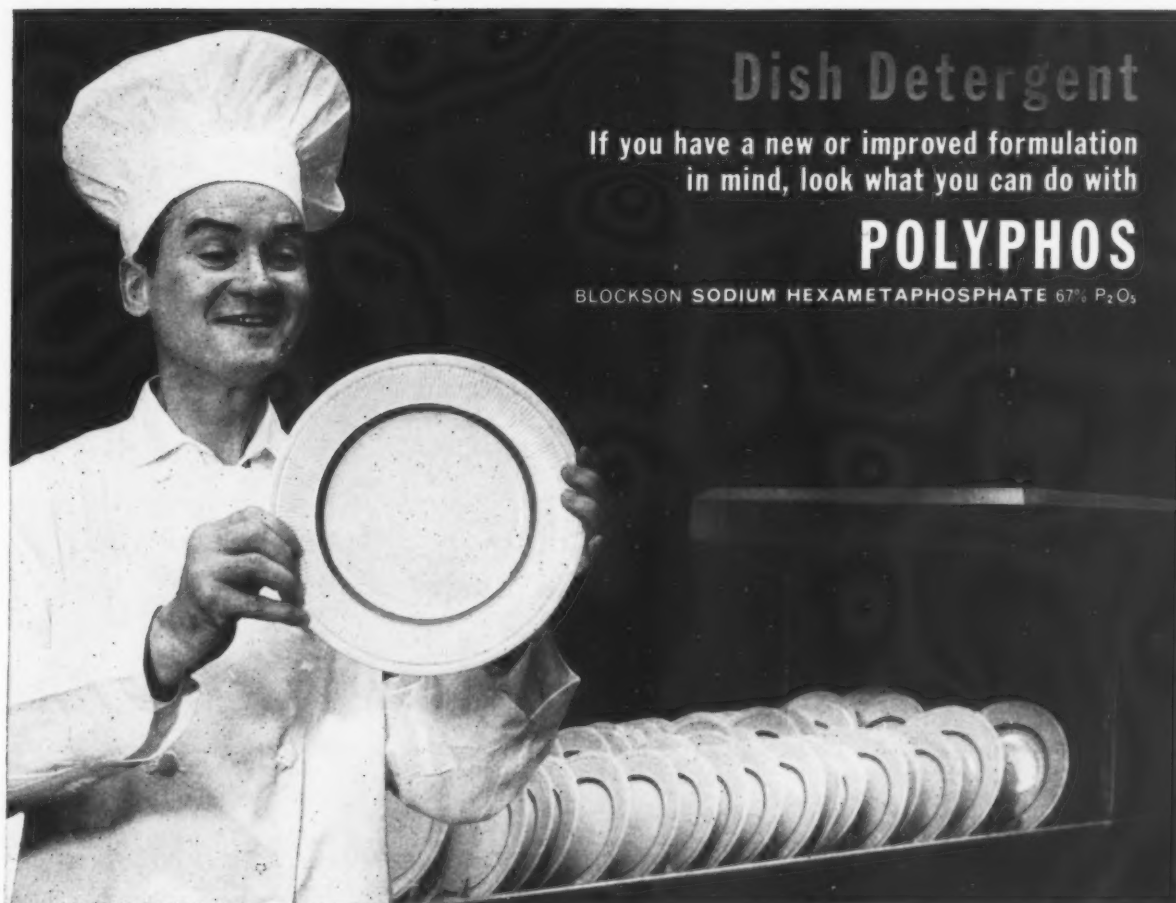
General Sales Office:
SLATTERY BLDG.
SHREVEPORT, LA.

PHONE: 2-2141, Ext. 495



ARKANSAS LOUISIANA CHEMICAL CORPORATION

A SUBSIDIARY OF ARKANSAS LOUISIANA GAS COMPANY



Dish Detergent

If you have a new or improved formulation
in mind, look what you can do with

POLYPHOS

BLOCKSON SODIUM HEXAMETAPHOSPHATE 67% P_2O_5



No matter what your new detergent idea may be, you can work it out better with Polyphos in your formula. If you seek the highest possible phosphate concentration, Polyphos gives it to you

—67% P_2O_5 content PLUS a solubility of 150 parts in 100 parts water at 140° F.

If your objective is to increase the cleaning power of your detergent by using more alkali, Polyphos gives you more room to do it. That's because 25% less Polyphos will do the same water softening job as the best sodium phosphate runner-up. You can use that "extra room" to put extra alkali into your detergent.

Since Polyphos softens water by sequestration and not by precipitation, your detergent alkali is not used up by the softening process. With Polyphos in your formulation, you have automatically increased its cleaning power simply by increasing the alkaline availability.

Incidentally, Polyphos' very high sequestering power minimizes sparkle-inhibiting film on glassware.

This, together with its optimum deflocculation and food-particle dispersion... assures more effective dish cleaning during the brief contact time available to the cleansing operation.

Another important advantage of working with Polyphos is its high compatibility, not only with the non-ionics, but with other components in your formulation. This high compatibility, plus the "assists" it provides the other components, lessens the need for critical formulation controls.

Polyphos assists even your wetting agent. Its presence enhances your dish detergent's free rinsing property. And not the least of its contributions is its optimum stability in the pH range where dish detergents function best.

This brief summation suggests why so many formulators consider Polyphos their most important single component. They know they can readily replace other formula ingredients. But nothing can take the place of Polyphos—Blockson brand Sodium Hexametaphosphate. May we send you a sample and data bulletin?



BLOCKSON CHEMICAL COMPANY, Chemicals Division Olin Mathieson Chemical Corp., Joliet, Ill.

less residual odor on fabrics ...

when the softener has **New ADM**

**easier perfuming ... whiter too! non-irritating to skin ...
more softener quality at no added cost**

Now, No Musty Softener Smell! Odor is virtually eliminated as a textile-softener problem with the introduction of ADM's new Adogen 442.

This is a new quaternary salt specially developed by ADM research chemists to produce a finer quality softener for commercial and home laundering. It is created through ADM's unique processing from highest purity fatty amines.

As a result, Adogen 442 is exceptionally free from objectionable odors, both in the bottle and on treated fabrics. Blindfold tests show Adogen 442 can help you cut back perfuming costs and lowers residual odor after use dramatically. Panel tests on odor showed Adogen 442 excellent for commercial softeners. Comments like musty, sour and stale were replaced by deli- references to clean and fresh.

Offers Whiter Color—Adogen 442 is an exceptionally white di-hydrogenated-tallow quaternary, sold as a 75% paste in alcohol and water. Its lighter color makes it ideal for even the finest grade softeners. Com-

mercial batches of Adogen 442 run consistently Gardner 1 to 3. This gives fabric softeners a brighter, livelier color in the bottle, whether they are white or tinted.

Non-Irritating To Skin—Dermatological tests on albino rabbits reveal that Adogen 442 is essentially non-irritating to skin. In neither the primary nor the latent skin irritation tests were any significant erythema or edema formation detected. Adogen 442 has no cumulative toxic effects.

Water dispersible Adogen 442 is soluble in polar organic solvents and many of the non-polar type. It is also compatible with non-ionics as well as other cationic surfactants. To further protect its quality, Adogen 442 is delivered in epoxy-phenolic lined drums especially designed for ADM.

For further information on Adogen 442, or other ADM quaternary ammonium compounds, write to Archer-Daniels-Midland Co., 700 Investors Building, Minneapolis 2, Minn. Research samples on request.

Industrial Bacteriostat News!

Here are new savings and new performance even in hard water in industrial bacteriostats just developed by ADM research: ADM furfuryl Adogen 446. This low-cost furfuryl quaternary combines exceptional new solubility with germicidal effectiveness.

Striking performance in Chambers tests against *Staphylococcus aureus* in 500 ppm hard water shows Adogen 446's effectiveness against gram positive bacteria. The phenol coefficient of Adogen 446 compares favorably with benzyl quaternaries and cetyl pyridinium chloride. Solubility of up to 40 per cent in tap water and 20 per cent in brine helps preserve its sanitizing efficiency under adverse water conditions. Ask us for more facts about its exceptional performance.

Low cost and germicidal effectiveness combine to make Adogen 446 a promising ingredient for hotel and restaurant sanitizers, bottle washing, floor cleaners, and a variety of industrial germicides. The long fatty chains in the new furfuryl quat gives balanced conditioning properties which may be useful in hair rinses, textile specialties, and a host of other applications. Information and development samples may be had by writing Archer-Daniels-Midland Co., 700 Investors Building, Minneapolis 2, Minnesota.

Adogen 442



ADM and Atlas Powder Announce First Gas Chromatography For Primary Amines

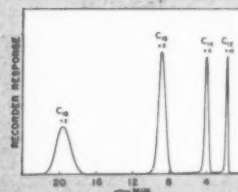
Not so long ago ADM broke the ice and revealed the first use of gas chromatography in routine production line analysis of fatty chemicals. A genuine milestone it represented in over 25 years of searching and researching for better ways of making chemicals.

But one thing had us stumped . . . try as we would, we just couldn't analyze amines because the peaks were asymmetrical. But, today, things are different.

Eager beavers at our own and Atlas Powder Company's labs have jointly developed a method to make a gas chromatographic analysis directly on a primary amine. Unless you have tried and failed in this attempt, you'll probably never really appreciate how proud this moment is, even though we can't yet touch secondaries.

The method utilizes a column containing a non-polar liquid substrate on a Chromosorb W solid support which has been treated to reduce absorptivity. Relative sensitivity factors, determined for pure amines, are used to correct peaks during analysis. It works beautifully for the separation and analysis of primary fatty amines with chain length from 8 through 22.

Matter of fact, the improved color and higher purity of our new Adogens, like 442, is at least



indirectly a proud result of our growing skill in gas chromatography.

Add to this our world-wide ADM operations, which give use control of raw materials, and you see we have quite a favorable atmosphere for production and control of quality Chemifats . . . whatever their type.

**Archer-
Daniels-
Midland**



CHEMICAL PRODUCTS DIVISION
734 Investors Building
Minneapolis 2, Minnesota

NOPCO® HY-PURITY ALKYLOLAMIDES APPROACH 100% AMIDE

Nopco's Hyonic® LA Series offers essential foam stability and detergency

Conventional alkylolamides are only about 60% pure. By-products—unreacted diethanolamine and diethanolamine soap—are allowed to remain to prevent formation of ester-amide at the expense of the true surface-active agent.

Nopco—due to advanced knowledge of the chemical reactions involved—has been able to develop a series of alkylolamides which function efficiently but are almost totally free of unreacted diethanolamine, ester-amide and other by-products. Nopco Hy-purity Alkylolamides, the Hyonic LA Series, offer amide content approaching 100% in contrast to the conventional 60%. Used with other surface-active agents in dishwashing detergents, shampoos, bubble baths, industrial cleansers, light duty liquid cleaners, floor cleaning preparations,

and textile detergents, they offer these advantages:

- They build and stabilize foam
- They improve detergency and wetting
- They inhibit rusting of steel containers

Nopco Hy-purity Alkylolamides, when used in liquid detergents, measurably increase viscosity.

The Hyonic LA Series is only one of Nopco's complete line of surface-active agents, products which permit you to tailor your detergents to the desired performance and marketing standards. Nopco offers a single source for all your detergent requirements, plus generous quantity discounts and freight savings. Without obligation, write for technical bulletins on the Hyonic LA Series or information on other Nopco surface-active agents.



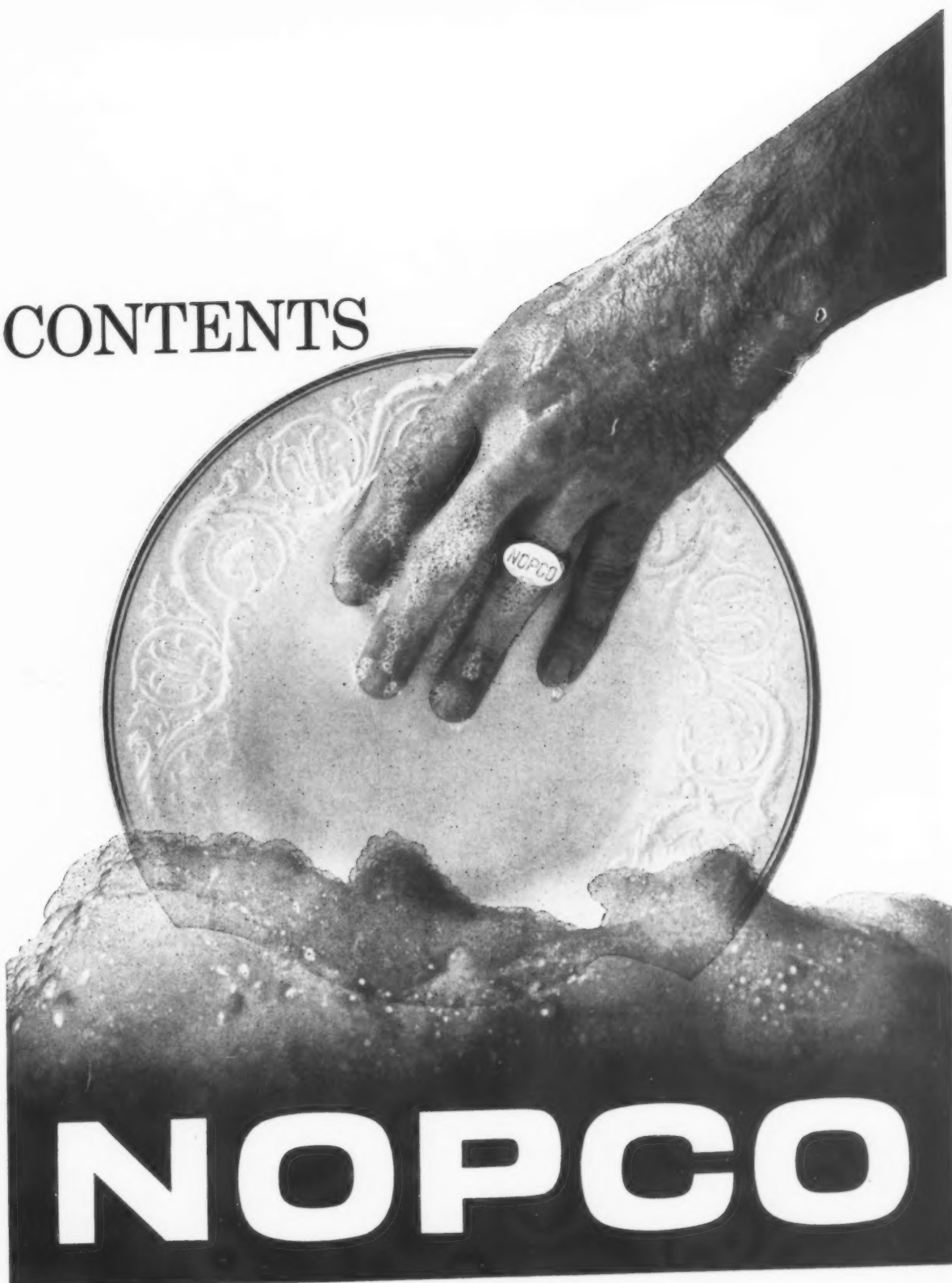
NOPCO CHEMICAL COMPANY

60 Park Place, Newark, N.J.

PLANTS: HARRISON, N.J. • RICHMOND, CALIF. • CEDARTOWN, GA. • LONDON, CANADA

A SKILLED HAND IN CHEMISTRY... AT WORK FOR YOU

CONTENTS



FOR FRESH, UNCHARTED ADVENTURES IN FRAGRANCE!

FOLROSIA*

...a new, "broad-spectrum" synthetic aromatic with a *deep red rose* character. Use it to create a crisp, natural, leafy rose aura . . . or to lend intensity and personality to subtler blends.

FOLROSIA blossoms with new levels of floral realism! Whether you wish to enhance familiar rose materials, create bold new rose accents of uncommon floralcy and naturalness, or add fresh, lifelike notes to more subtle compositions, FOLROSIA provides a simple, yet unusual answer.

FOLROSIA possesses remarkable tenacity, with a fragrance and nuances reminiscent of fresh green rose foliage. It is extraordinarily stable in soaps, detergents, cosmetic preparations, and its odor effectiveness remains at a high level over extended periods. Write for samples and technical data.

*Trade-mark



GIVAUDAN-DELAWANNA, INC.
321 West 44th Street
New York 36, N.Y.

as the editor sees it...

H HAIR SPRAYS . . . The price of liberty is supposed to be eternal vigilance. And the price of protecting one's business interests against unwarranted attacks is just about the same thing. Last month, the Chemical Specialties Manufacturers Association told its members that some recent references had been noted on the "dangers" of using hair sprays. We thought that this point had been pretty well settled by the Food & Drug Administration over a year ago. But it seems not. CSMA points to some articles published in medical journals concerning alleged clinical evidence of hair spray toxicity.

Reviewing a CSMA bulletin sent out in February, 1959, FDA is quoted as follows: "From the results of our tests, we concluded that normal use of hair spray preparations of the composition and physical characteristics of those studied in our laboratories presents no problem of safety in use." Subsequently, FDA presented a paper before a meeting of the Toilet Goods Association entitled "Inhalation Toxicity Studies of Six Types of Aerosol Hair Sprays" which confirmed the original "safety in use" findings.

CSMA now advises that when any references to hair spray inhalation dangers are noted anywhere that a reprint of this paper be sent with no comment except that it is the result of research by FDA. CSMA will gladly cooperate in sending copies of the article.

* * * * *

C COUPONS . . . Abuse in coupon redemption has become slightly more than annoying to manufacturers. It is a first rate headache. Now soapers, food marketers and others are out to do something about it and if possible to stop or reduce the abuses. We fear that they are going to have a tough row to hoe. In fact, we have a hunch that they are going

to end up by not getting anywhere fast. The whole mess could mean the practical elimination of coupons and couponing.

That food chains and other retailers have been accepting merchandise coupons for cash or for merchandise other than that covered by the coupons is no secret. The practice is widespread and has been for several years. In busy supermarkets, checkout clerks simply do not have the time to identify coupons with goods purchased. Nor do they have the inclination to bother. The coupons may be a brilliant merchandising stunt to their sponsors, but to the clerk they're just a pain in the neck. It's easier and quicker just to give the shopper 20 or 25 cents in cash.

For some time we have had the feeling that couponing was geared to the grocery store of fifty years ago, not present-day supermarkets. Today couponing is different, very expensively different, for the manufacturer. The cost of misredemption obviously runs into millions. Our feeling is that the manufacturer has invited current abuses. Can he devise means to end them? We have our doubts.

* * * * *

P PRIVATE BRANDS . . . If we may judge by straws in the wind, there is a growing trend for marketers of detergents, soaps, chemical specialties and the like to push their own private brands. This naturally is at the expense of the nationally advertised brands. Actually, any such tendency is not new. It is probably somewhat more apparent than it was a year or two ago. As soon as a marketer, whether he sells industrial products or those for the home gets large enough, he craves to see his own label on his goods, he encourages his salesmen to push their sale and, last but not least, he likes the wider margin invariably afforded by private brand merchandise.

Automotive Cleaners

Bubble Baths

Steam Cleaners

Dishwashing Compounds

**PILOT
HD-90**

ALKYL ARYL SULFONATE — 90% PLUS ACTIVE

Household Cleaners

Metal Cleaners

CORNERSTONE FOR DRY COMPOUNDING



PILOT *Chemical Company*
of California

P.O. BOX 22130
LOS ANGELES 22

Manufacturers of
• Sulfonic Acid
• Dodecyl Benzene Sulfonates
• Sodium Toluene Sulfonate

Need a reliable and economical cornerstone for your dry compounding?

HD-90 is a drum-dried sulfonate flake that is dust-free, dry flowing, colorless and odorless; and these fine properties stay that way even after long periods of storage or climatic changes.

Pilot HD-90 is the result of an ice-cold sulfonation in a dilute, air-free vacuum. This unique process builds-in an outstanding detergency and sudsing character.

Pilot HD-90, an excellent *hard surface cleaner* "as is," will formulate all sorts of *specialty cleaners* that dry clear without sulfate residues.


High-foam-per-pound-of-active makes HD-90 ideal for such products as *scouring powders* and *bubble baths*! The high organic and blandness of HD-90 is desirable for *cosmetics*, *dishwashing liquids*, etc. HD-90 may be used to increase the concentration of sulfonate active in *dry mixes* which have been "dry neutralized" from Pilot ABS-99 Sulfonic Concentrate.

Write today for samples and information.

Then, there is the question of price. National brands usually command a premium over private brands. Greater public acceptance of the well-known brand naturally means that people will pay more money for it. But how much more? That's what worries the private brand marketer and probably accounts for the fact that he cuts his price usually too far under the national brand. He wants to make certain that the price differential is really attractive. And so we find marketers of private brands passing on all their savings to their customers. Many products seem to be priced unnecessarily low, assuming of course that their marketers are interested in making a profit.

Too often, labeling of private brand products is a hit or miss affair. Many wild and unsubstantiated statements are made. Labels are not checked and rechecked as is the national brand. The private marketer is in a hurry to get to market, can't bother with labels. But it can add up to a rather large headache. Labels should be based on fact, not fiction.

* * * * *


 **INSECT BATTLE . . .** In recent months, the school of thought which holds for fighting insects with fungi and bacteria instead of insecticides has been attracting more attention. This is the answer to the problem of insect resistance, they tell us. Infected insects spread diseases among themselves with nary a human hand being raised. The idea is not particularly new as witness the demise of Jap beetles in some localities a few years back from set cultures of the so-called milky disease. Maybe the same thing can be done with flies, mosquitoes, roaches, bedbugs, et al. At least, there are some people who think so.

Then arises the uneasy thought of what happens to insects which get the disease and survive? Wherein do they differ from insects which have withstood the onslaught of insecticides and still live? Do we switch diseases like we switch insecticides, or do we have the equivalent of good, old pyrethrum to switch back to? We don't know the answers. However, we do remember back some twenty years ago when viruses which were supposedly deadly to rats and mice were

heralded as the solution of the rodent problem. They never got to first base. Uncle Sam stepped in and called a halt. The stuff might be too dangerous to humans.

Maybe we're in a fair way to breed races of super-insects, impervious to disease and insecticides. It seems that we could be right back where we started only with stronger and more resistant insects on our hands.

* * * * *

 **WHAT COSTS? . . .** Washington hearings on the cost of new drugs to the public revealed an extremely sharp mark-up from manufacturers' costs. If we can assume that expressed newspaper opinions reflect public thinking on the subject, then the dear old public is quite convinced that they have been and are being rooked by the drug makers. How many years were spent in developing a new drug or the millions of dollars spent in research seems to be ignored quite conveniently by the editorial writers and the public as well. That the new drugs are far more effective medicaments than their predecessors likewise seems to be glossed over quickly.

Accusations aimed at the drug manufacturers present an analogous situation to other chemical products. "Two cents worth of chemical in a pint of water" and the public pays a dollar or more for the product. How many times have we heard this old bromide applied to chemical specialties and detergents! Again the cost of research is conveniently forgotten and especially the millions spent on unproductive research, thousands of research projects which end up blind alleys. Or of new products made obsolete by something else before the manufacturer ever has a chance to get his money back. Or other contingency which leaves the manufacturer holding the bag.

Millions are spent yearly by chemical and drug people, both individually and as groups, on so-called "public relations." But the public, and our crusading daily press to boot, have not the slightest conception of what is entailed in the development of a new product. Maybe that's one reason why they are the repeated victims of a bad press.



"Sales Minded Fragrances"

The top-selling brands are utilizing "SALES-MINDED FRAGRANCES" to gain their place in today's markets. Quality perfumes, expertly designed and engineered to perform a "Sales" function are replacing the traditional "SOAP ODORS" of yesterday. van Ameringen-Haebler, leading creators and manufacturers of fine perfumes and fragrances for all types of products, has the unequalled experience and ability to suggest a new, effective "Sales-Minded Fragrance" for your soap.



van Ameringen-Haebler *division*
INTERNATIONAL FLAVORS & FRAGRANCES INC.

521 West 57th St. • New York 19, N. Y.

Leading Creators and Manufacturers in the World of Fragrance

ARGENTINA AUSTRIA BELGIUM BRAZIL CANADA ENGLAND FRANCE GERMANY HOLLAND INDONESIA ITALY JAPAN SOUTH AFRICA SWEDEN SWITZERLAND

as the reader sees it...

More on "Variations . . ."

Editor:

In the February 1960 issue of *Soap & Chemical Specialties*, certain exceptions to the paper, "Variations in Phenol Coefficient Testing," which appeared in the October 1958 issue, were published. While the objections were directed at the statistical approach, they included itemizations as to errors.

There can be no excuse for such errors as misspelling of the word Coefficient and the identifications in the tables of the mean deviation value as the standard deviation.

The data employed was selected from representative laboratory records developed periodically to check on the differences between technicians within a regulatory operation. Such records are continually employed as a basis for developing improved precision within that laboratory. There is more difference in variances than is considered desirable.

If the results were based on the work of Operator 2 alone and the proper arithmetic corrections made, the values for Table I would list the Mean Coef. as 54.4, the Mean Deviation as 3.2, the Standard Deviation as 3.8, the Coefficient of Variation as 7.0%, the 95% Confidence Limits as 46.8-62.0, and the Permissible Coefficient of Variation, based on 95% Confidence Limits, as 14%. For Table II and Operator 2, the Mean Coefficient value would be 4.7, the Mean Deviation 0.34, the Standard Deviation 0.42, the Coefficient of Variation 8.9, the 95% Confidence Limits 3.9-5.5, and the Permissible Coefficient of Variation based on 95% Confidence Limits 17.8%. Here Operator 2 showed greater variation than Operator 1. In Table III the values for Operator

2 would be listed as Mean Coefficient 5.6, Mean Deviation 0.24, Standard Deviation 0.28, 95% Confidence Limits 5.0-6.2, Coefficient of Variation 5.0%, and the Permissible Coefficient of Variation, based on 95% Confidence Limits, as 10.0%. These figures would not materially alter the general conclusions given.

It should be acknowledged that use of the same data and a different type of arithmetic might lead to different conclusions. But, in the application of a test of significance of difference of variation to determine confidence limits, different types of samples and a somewhat different experimental design would seem more desirable. L. S. Stuart, Head, Bacteriology Section, Pesticides Regulation Branch, Agricultural Research Service,

U. S. Department of Agriculture, Washington 25, D. C.

—★—

Correction

Two errors were made in Table II on page 45 of the April issue of *Soap & Chemical Specialties* in the article, "Liquid Detergent Builders," by Raymond Getty and William Stericker of Philadelphia Quartz Co. The column showing percentage of alkalis in Table II should be headed K_2O , not Na_2O as was published. The same holds true for the ratio column; the last one in the table, which is incorrectly headed SiO_2/Na_2O . It should read SiO_2/K_2O .

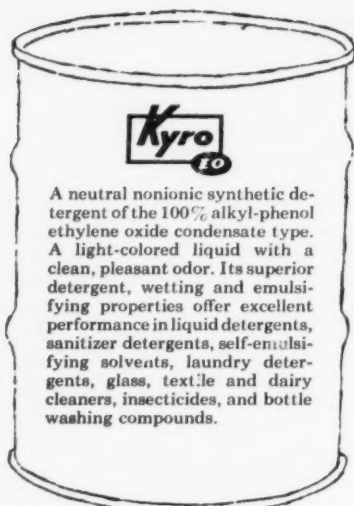
A typographical error appears also in the spelling of the word, "analysis", in Table VI on page 48.

Reprints of the article with corrections indicated are available

Marshall S. Lachner, right, president of B. T. Babbitt, Inc., New York, meets with Erich K. Wenzel, vice-president and marketing director of Siegel-Werke, West German manufacturer of household cleaning products. Dr. Wenzel was on a national tour here of household product firms and supermarket chains. The tour, sponsored by the West German Association for Consumer Research, was designed to explain competition in U. S. between nationally advertised and private brands.



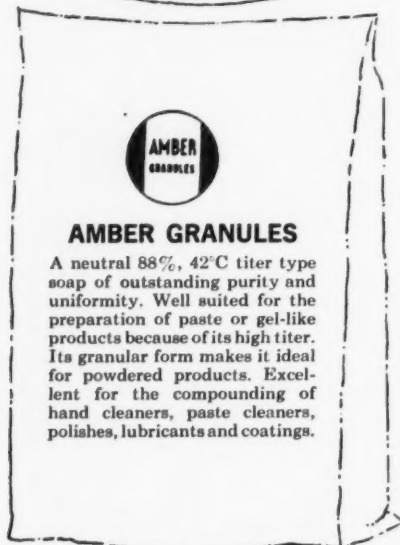
THERE'S A PROCTER & GAMBLE PRODUCT FOR EVERY FORMULATION NEED



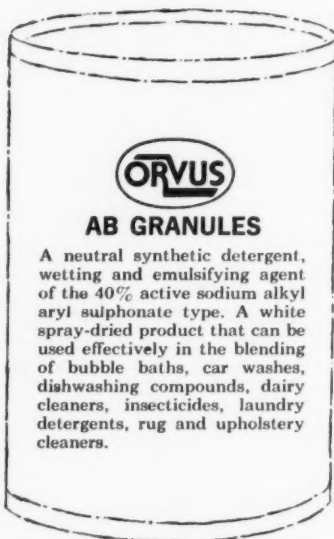
Kyro
A neutral nonionic synthetic detergent of the 100% alkyl-phenol ethylene oxide condensate type. A light-colored liquid with a clean, pleasant odor. Its superior detergent, wetting and emulsifying properties offer excellent performance in liquid detergents, sanitizer detergents, self-emulsifying solvents, laundry detergents, glass, textile and dairy cleaners, insecticides, and bottle washing compounds.



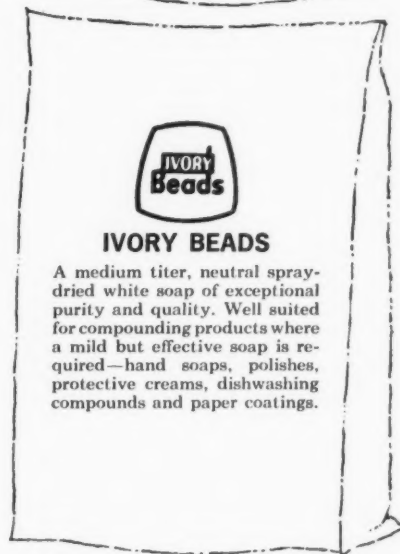
ORVUS
WA PASTE
A neutral synthetic detergent and wetting agent whose active ingredient is mainly sodium alkyl sulphate. Excellent sudsing, wetting, dispersing and penetrating properties. Ideal for paste and liquid shampoos, bubble baths, liquid detergents, liquid car washes, liquid floor cleaners, insecticides, glass cleaners, rug and upholstery cleaners.



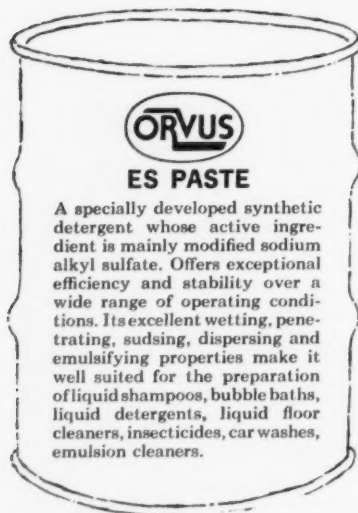
AMBER
GRANULES
AMBER GRANULES
A neutral 88%, 42°C titer type soap of outstanding purity and uniformity. Well suited for the preparation of paste or gel-like products because of its high titer. Its granular form makes it ideal for powdered products. Excellent for the compounding of hand cleaners, paste cleaners, polishes, lubricants and coatings.



ORVUS
AB GRANULES
A neutral synthetic detergent, wetting and emulsifying agent of the 40% active sodium alkyl aryl sulphate type. A white spray-dried product that can be used effectively in the blending of bubble baths, car washes, dishwashing compounds, dairy cleaners, insecticides, laundry detergents, rug and upholstery cleaners.



IVORY
Beads
IVORY BEADS
A medium titer, neutral spray-dried white soap of exceptional purity and quality. Well suited for compounding products where a mild but effective soap is required—hand soaps, polishes, protective creams, dishwashing compounds and paper coatings.



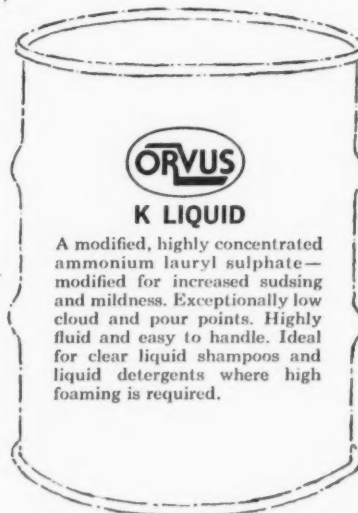
ORVUS
ES PASTE
A specially developed synthetic detergent whose active ingredient is mainly modified sodium alkyl sulfate. Offers exceptional efficiency and stability over a wide range of operating conditions. Its excellent wetting, penetrating, sudsing, dispersing and emulsifying properties make it well suited for the preparation of liquid shampoos, bubble baths, liquid detergents, liquid floor cleaners, insecticides, car washes, emulsion cleaners.

Procter & Gamble will gladly supply you with information on how you can save time and money when you formulate with Procter & Gamble products. You can also get technical help in connection with their use by writing to:



Procter & Gamble

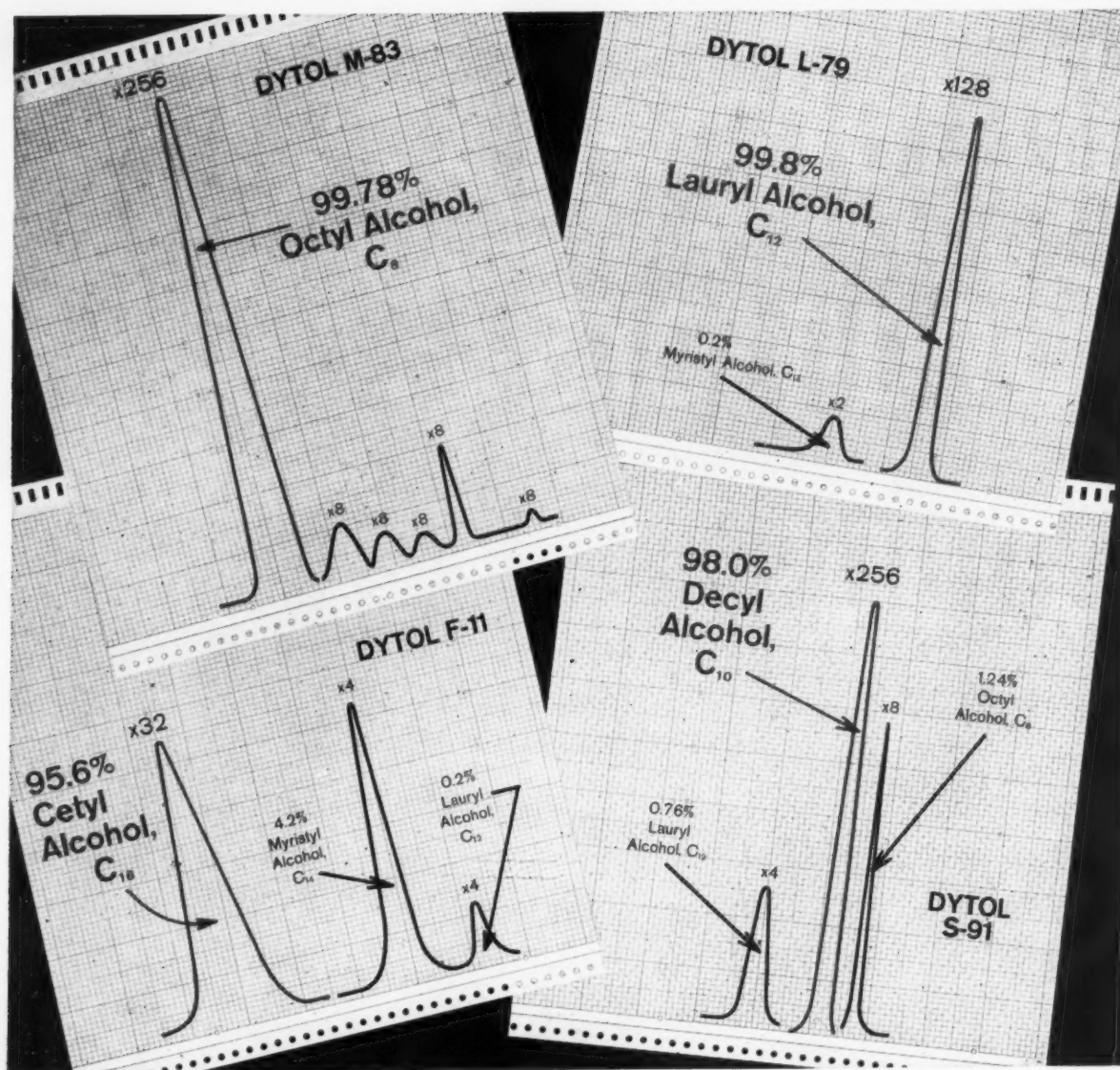
BULK SOAP SALES DEPARTMENT
P. O. BOX 599, CINCINNATI 1, OHIO



ORVUS
K LIQUID
A modified, highly concentrated ammonium lauryl sulphate—modified for increased sudsing and mildness. Exceptionally low cloud and pour points. Highly fluid and easy to handle. Ideal for clear liquid shampoos and liquid detergents where high foaming is required.

Detergents . . . Cleansers . . . Soaps . . .





Looking for high purity **FATTY ALCOHOLS?**

Are you looking for high purity fatty alcohols that will give you high purity derivatives? Then note that each of the Rohm & Haas fatty alcohols shown in the gas chromatograms above has an exceptionally high percentage of a single alcohol. The per cent content of any component appearing on such curves is calculated by multiplying the area under the peak by the sensitivity factor (e.g. x256). The chromatographic analyses shown were run by using routine operating techniques typical of every-day production quality control procedures. It can be seen that the sensitivity of the detector was changed as different fractions were recorded, in order to obtain the resolution required for accurate analyses.

Rohm & Haas also offers four other fatty alcohols covering a broader range of compositions: DYTOL A-24

(71% lauryl, 27% myristyl), DYTOL B-35 (60% lauryl, 25% myristyl, 13% cetyl), DYTOL J-68 (82% lauryl, 17% myristyl), and DYTOL E-46 (34% cetyl, 65% stearyl). For technical information on DYTOL fatty alcohol chemical reactions and potential applications, write to Dept. SP-15.

DYTOL is a trademark, Reg. U. S. Pat. Off. and in principal foreign countries.



Chemicals for Industry
ROHM & HAAS
COMPANY
 WASHINGTON SQUARE, PHILADELPHIA 5, PA.

SOAP and *CHEMICAL SPECIALTIES*

PREMIUMS . . .

**From hair pins to Hi-Fi's they sell
soaps and detergents around the world**

FOURTEEN years ago, a man in a laboratory blew a bubble. The man was a research chemist. The bubble he blew appeared to the naked eye to be just another soap bubble. It shone in the sun like a soap bubble. It floated in the air like one. And like all soap bubbles, it was extremely sensitive to the touch.

However, this was not just another soap bubble—but a brand new kind of one. Technically, it wasn't a soap bubble at all, but a synthetic one carrying the name, "sodium lauryl sulphate."

This synthetic bubble had some unusual properties. Unlike regular soap, it was almost completely insensitive to water hardness. Unlike soap, it flourished in cold water. It even flourished in salt water. And although chemists had managed before to make synthetic bubbles, they weren't very muscular. This was the first one with enough washing power to get

the dirt out of the weekly family wash.

Because of these characteristics, this bubble started a literal revolution in one of the major consumer goods industries in the world—the industry devoted to the manufacture and sale of washing products.

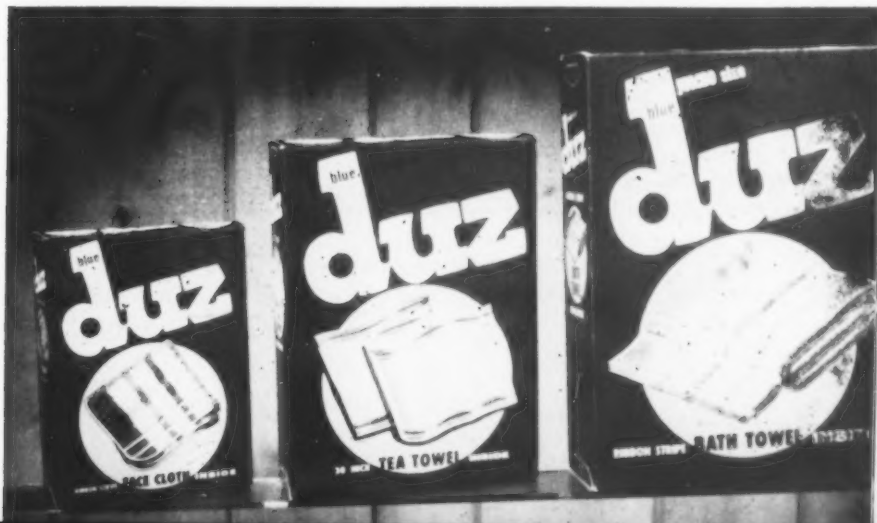
This new kind of bubble multiplied like a paramecium on overtime, and its progeny spread throughout this country rapidly. After a very short time it became difficult to lift the lid of a washing machine anywhere in the United States and find a single one of the old-fashioned soap bubbles.

As with any revolution, this one had profound effects. Every person and every organization associated with the soap industry was affected, including equipment makers, chemical manufacturers, coconut planters and cattle ranchers. Brands which had been established for years shrank to nothing. New brands sprang up overnight.

By D. H. Trott*,
advertising manager
Overseas Division
Procter & Gamble

*Presented at Premium Advertising Association Conference, April 5, 1960.

TREND STARTER: There's a premium in every package of Canadian "Duz". Premiums, shown on each package, consist of face cloth, tea towel, bath towel.





Popular premium comb decorates hair of young lady of Peru.

such as "Tide," "Fab," "Cheer," and "Surf."

In 1947, these bubbles started cropping up in countries south of the border. In 1948, they overflowed into Canada. And in 1950, the prevailing wind blew them eastward across the Atlantic Ocean.

Impact Abroad

The impact of these magic bubbles on the status quo in foreign markets was in many cases even greater than the impact had been on the United States market. And in the dance for position in these markets, which hardly could be described as a minuet, some things happened which otherwise might never have come to pass.

Take, for example, the case of one large soap company in Canada. This company for years had been solidly entrenched as a leader in the washing powder market. Suddenly it found its position seriously eroded by the new synthetic detergents. In an attempt to repair the situation, this company imported from the United States into Canada a brand which had had only a modest success in the United States. And in 1952, it launched this brand nationally throughout Canada.

The different and significant thing about this brand, compared with other Canadian brands, was that in one size a face cloth was packed inside each package, and in another size a dish towel was packed in each package. Not just some packages, or for just part of the time, but in every package all of the time.

As another example of the effects of this soap suds revolution, take the case of a different soap company, in a different country in a different year. The country was Mexico and the year was 1955. I will not identify the company except to say that its name is called to my attention emphatically and pleasantly once each month.

In 1955, this company, in the synthetic detergent race in Mexico, was about as far behind its principal competitor as Old Mother Hubbard would be behind Herb Elliot. It occupied this unattractive position primarily because the competitive company had diagnosed Mexican washing conditions more accurately, and had started the race with a product the Mexicans considered to be far superior.

Now, the company of which I speak, had discovered the weak-

nesses of its products and had corrected them, but most Mexican housewives either didn't know this or didn't care.

Out of sheer desperation, therefore, this suffering, frustrated Mexican company tried something which to its knowledge never had been tried before in the history of the soap business.

It went out and bought a large supply of inexpensive premiums small enough to fit inside a soap package, — about sixty different varieties of such premiums. Then it introduced a new brand incorporating the new improved product, with one of these sixty different premiums in each and every package, after the fashion of the popular candied pop-corn called "Cracker Jack."

The Canadian face cloth premium in the package, in 1952, and the Mexican variety of premiums in the package in 1955 — these two premium actions started a chain of events which affected the world-wide marketing of soap powder profoundly, and gave it a very different complexion from the one we are accustomed to seeing inside the United States.

All of which is a rather verbose preamble to more explicit remarks on the subject of the use of premiums to sell soap in foreign lands.

The most striking difference

"Star" detergent, a Mexican product of P&G, which pioneered "Cracker Jack" type premiums.



between the way premiums are used to sell soap in the United States and the way they are used to sell soap in foreign markets is the prevalence in foreign markets of permanent and continuing premium offers.

In the United States, it is true that we have some brands of washing powder carrying a permanent premium, but these brands have a relatively minor share of the market. The most common use of premiums here is a one-shot promotion to provide a temporary sales stimulant.

In many important foreign markets, however, the packing of a merchandise article—or premium—inside the soap package, as a permanent part and parcel of the proposition offered to the consumer—has become a fundamental habit of the industry. This use of permanent premiums tends to take one of two basically different forms.

The first form is typified by the Canadian brand I mentioned earlier which put textile premiums inside the package. A basic feature of this style, which I will call the Canadian style, is that the consumer knows what type of premium is inside the package. In the Canadian instance, for example, she knows that one size of the brand contains a face cloth and that another size contains a dish towel, etc.

These two Belgian youngsters are playing with a collection of toys which they have gotten from packages of "Bonux".



Assortment of premiums offered with "Star" detergent of P&G in Mexico. Although housewives do not know which one to expect, they are sufficiently gratified by their surprise gifts to come back for more.

The other basic form of permanent premium was started by the beleaguered soap company in Mexico in 1955, as I described. We will call this the cracker-jack style. The basic distinguishing feature of the cracker jack style is that the housewife does not know what she will find in the package. There are some cracker-jack brands in some countries in which the housewife knows she will receive a toy, for example, or a piece of jewelry, for another, but the most popular and widely-found cracker-jack style gives the consumer anything from four marbles to a potato peeler, from six bobby pins to a can of shoe polish—without warning.

Now, it is as true as it ever was, that in the soap business, as in any business, there is no substitute for high quality products. No one yet has succeeded in fobbing off many packages of inferior prod-

uct on the strength of a premium offer.

On the other hand, with the exception of very few important markets, the soap manufacturer outside the United States who hasn't attended the College of Premium Knowledge is likely to learn his lessons the hard way from one who has.

Instead of relying on words alone to try to particularize this subject in terms of countries, brands and premiums, I would like you to be my guest on a quick tour of some of these foreign countries, and to step with me into the airplane of an itinerant world soap peddler. (In accordance with current Federal Communications Commission and television network rules on payola, I hasten to state that this airplane is furnished to us by Pan American World Airways one seat at a time, and at the regular price.)

Flying first of all to Canada, we will reserve a room at the Chateau Frontenac in Quebec, and use this as our base of operations for a quick survey of the Canadian premium-in-the-package soap market.

The brand which started the international premium boom was "Breeze"—with a face cloth in one size, and a dish towel in the other. When this brand first appeared, competitive companies looked at the modest market share it had in the United States, forecast its Canadian volume accordingly, and went about their busi-

(Turn to Page 269)



At 100, Los Angeles Soap Company Is Still Growing

THE WEST'S OLDEST SOAPER

IN 1860, down the dusty streets of a sleepy Mexican village named Los Angeles, there chattered a single pushcart. Inside jostled the results of a night's labor in a cramped one-story frame building. The product was a commercial laundry soap fresh from a fledgling company's single kettle. This was the humble beginning of a firm that today ranks fifth in the nation's soap industry—the Los Angeles Soap Company.

This year the company celebrates its one hundredth anniversary by pushing a button and putting into operation its new million-dollar detergent spray drying tower. With this investment in the West's most modern machinery for the production of detergents, the Los Angeles Soap Company demonstrates once again that the progressive spirit of the company's pioneers is ever present.

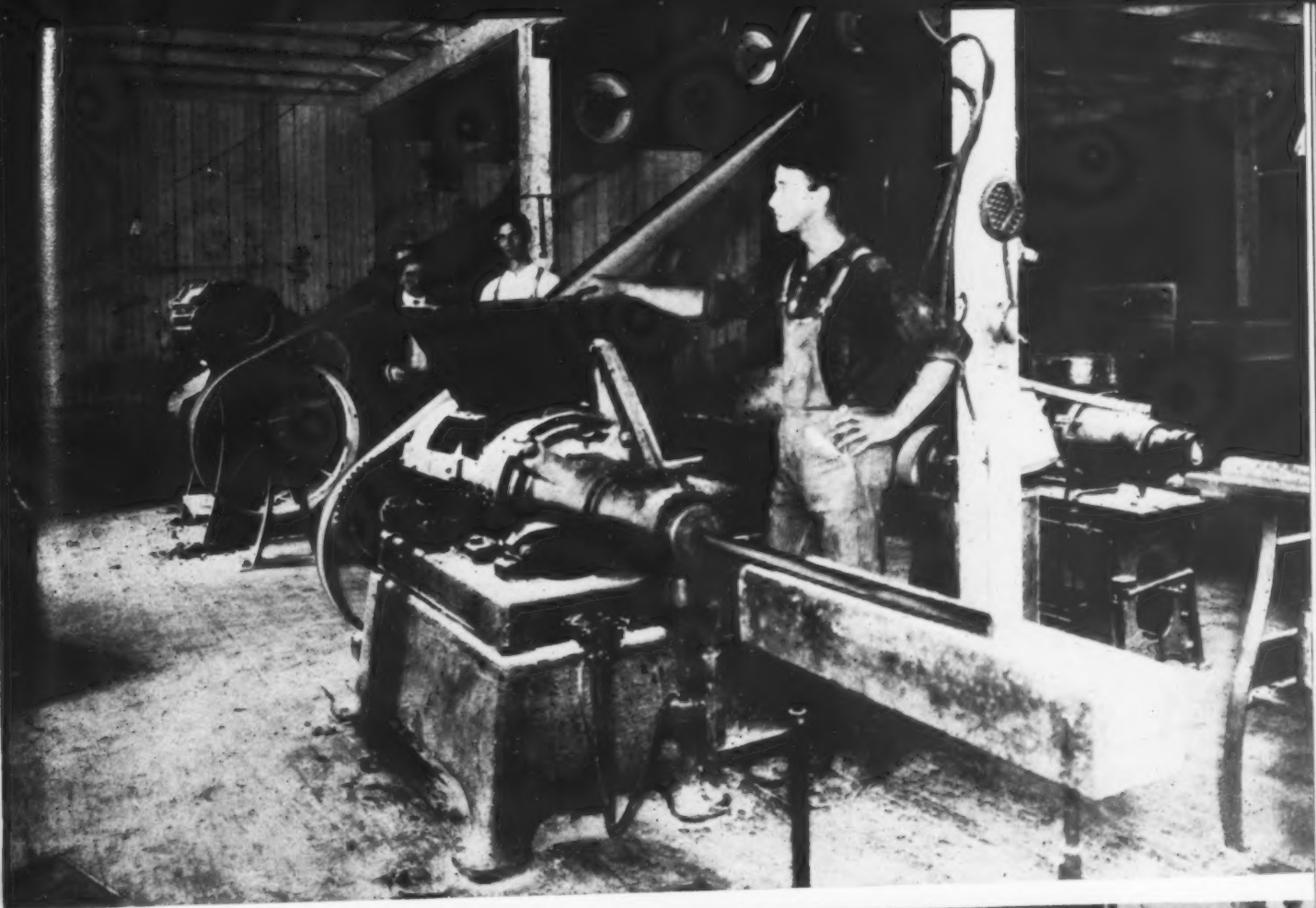
Pioneer spirit is chiefly what kept the company going in those early years. Customers were scarce until a young rancher named John A. Forthmann joined the company. It was he who established the pattern of producing the soap at night and selling it the next day—first from a pushcart, then later from a horse-drawn wagon. By setting a high standard for both quality and service, young Forthmann saw the small company flourish. In 1872 he acquired controlling interest, and, soon after, was joined by a friend who had been manufacturing soap in San Francisco, William Bergin.

The Forthmann-Bergin partnership proved profitable. Sales grew steadily. In 1874, the company moved from its first quarters to a two-story wooden factory erected on the site of today's main plant and office. With the arrival of the railroad two years later, the partners pioneered distant markets with marked success.

The year 1897 saw the installation of a glycerine recovery plant and the incorporation of the company. Less than a year later came the disaster. A devastating fire leveled the whole plant and the insurance coverage was discovered to be woefully inadequate. Nevertheless, Mr. Forthmann and William Bergin's successor, J. J. Bergin, had tasted too much success to admit defeat. On the fire-razed site, they built the largest, finest soap factory the West had ever seen.

Some of the leading brands produced in the spanking new factory were "Peerless Borax", "Mermaid Queen", "Western Star" and "Mermaid Washing Powder". The brand name "White King" first appeared in 1908 on a laundry bar soap. It fast became the firm's runaway best-seller. Next came "White King Granulated Washing Soap"—a giant step forward in the soap industry. This was the

TOP: Soap plodders in laundry bar production department about 1870. Note old style mill in background. New high speed liquid filling line BOTTOM was added in 1956.

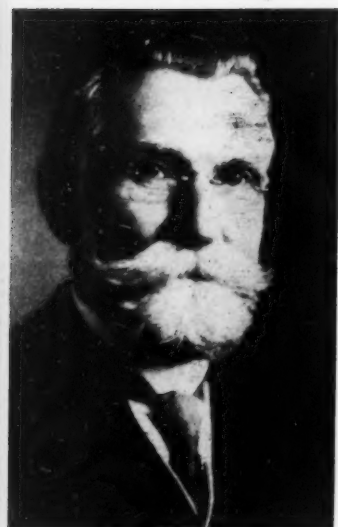


first granulated soap ever produced anywhere and the first product produced expressly for washing machines.

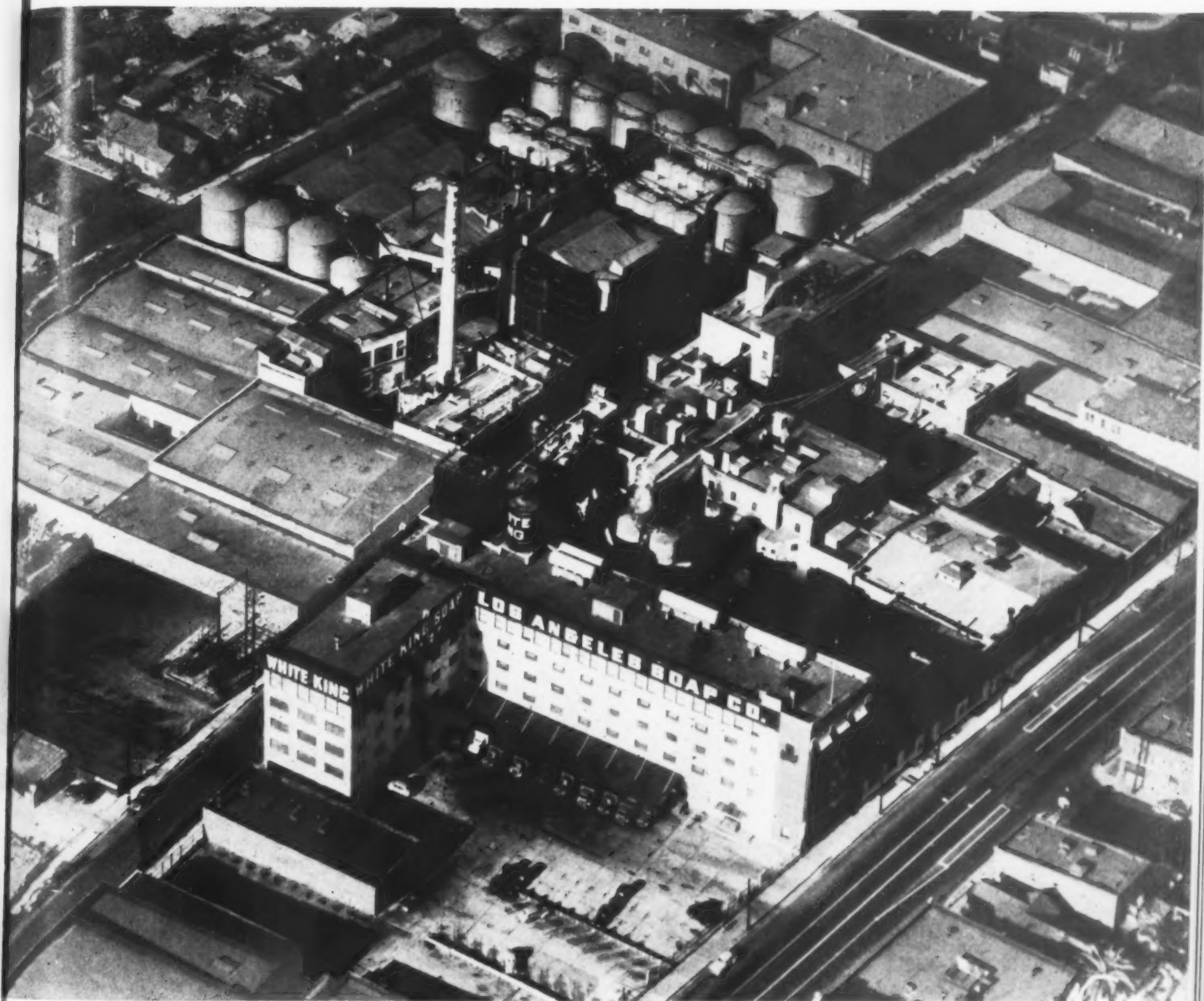
With the White King label the company mushroomed, matching booming business with new buildings and machinery. Sales offices were established in San Francisco, Portland, Seattle, Spokane, Salt Lake City, Denver and Phoenix. In 1931, the White King Soap Company came into being as the out-of-state sales organization of the Los Angeles Soap Company.

Although laundry soap formed the major part of the business, toilet soaps, household cleansers and water softeners were developed and firmly established in the market. Starting with different brand labels, they eventually adopted for the most part the White King name which had attained such a fine reputation.

New buildings and machinery were constantly added as business increased. Company growth had a constructive impact upon other business and industry in the West, too. It gave early support to banking through the founder's active interest as a director of several pioneering institutions. It stimulated the growth of cotton production in California through its pioneering use of cottonseed oil and



TOP, LEFT: J. A. Forthmann, founder of Los Angeles Soap Co., was grandfather of current president. UPPER RIGHT: Factory as it appeared in 1894. BOTTOM: Horse drawn wagons were used by San Francisco salesmen to deliver soap in 1871.



TOP: Factory today covers eight acres. Lower LEFT: Raw materials are now transported from bulk unloaded equipment in "Tote Bins" and are dumped automatically either directly into production or onto conveyors. RIGHT: Andrew K. Forthmann, president, grandson of founder.

its financing of crude cottonseed oil mills in the Imperial Valley and later in the rich San Joaquin Valley.

The company pioneered the use of tetra sodium pyrophosphate for soap and water softener use, and became the first carload buyer of this product in the United States; today, this chemical is used in heavy volume by every soap manufacturer. By financial assistance the company encouraged the first large scale production of soda ash from California brine deposits.

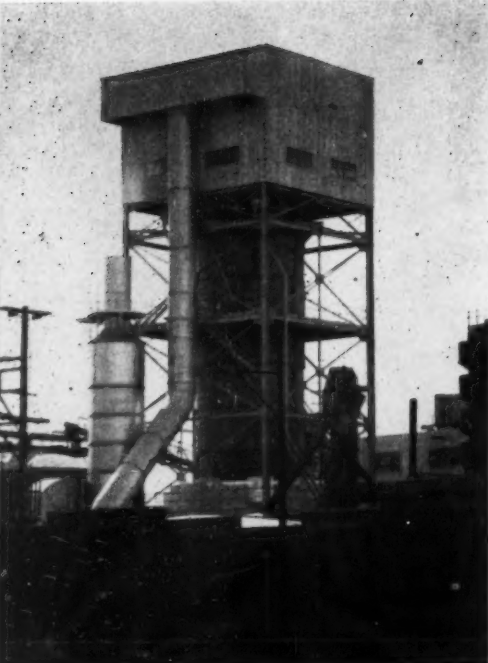
As the first soap to be sold in a package, White King opened up new sales avenues for printing and paper-board products. In those and other ways the company's growth stimulated expansion of surrounding agriculture and business.

The shortages, engendered by World War II accelerated research on synthetic detergents. As a result, in the years following the war, other manufacturers discovered that improved synthetic detergents were meeting with greater acceptance from the public. With a watchful eye on the growing market, White King continued to develop and improve its own detergents. As a result, "White King Liquid Detergent" was launched in 1954, followed shortly by "White King D Detergent". Both were well received by dealers and consumers alike and continue to strengthen their share of the Western market. Today soap is no longer the major volume item of the Los Angeles Soap Company. Sales volume of synthetic detergents has expanded so greatly that "White King Soap" has been reduced to number two position within the company.

In 1955, Andrew K. Forthmann assumed the presidency of the company. Immediately he set in motion long range plans for improving plant efficiency, increasing product research and establishing a well-informed marketing staff and sales force. Two modern production lines for liquid detergent were added. New equipment was installed to handle bulk materials more efficiently, to reduce labor costs and smooth the flow of production from incoming raw materials right through to the finished products. The company acquired some of the nation's best research chemists, all with extensive experience and many with doctorate degrees from leading universities. They continue to work on a program of product improvement and new product development.

It is a fairly well-known fact, to competitors of White King at least, that in its long history the firm's promotion-minded, hard-hitting sales force has been greatly responsible for the success of the company. Ability to stretch an advertising dollar has contributed greatly too, and many marketing principles in wide use today were pioneered at White King. Radio "soap operas," premiums and contests were "old hat" at White King when other industry members put them to use.

The single factory covering eight acres, and located in Los Angeles, serves the 13 Western States, produces in excess of forty million consumer packages per year and thousands of tons of product for industrial plants, laundries and dry cleaning establishments. Around 400 persons are employed. ■



White King's spray drying tower was put into operation in February of this year. Construction by Industrial Engineers, Inc.

Suggested Specifications for

Liquid Drycleaning Detergent

By **Jerome B. Schapiro***

Dixo Co.
Rochelle Park, N. J.

THE drycleaning industry needs specifications to define the materials it is buying and using. This paper is concerned only with a specification for detergents.

The type of detergent specification needed must define performance characteristics, not content. Determination of content would violate the basic producer-consumer relationship: The producer is expert in compounding a product for maximum performance in a given situation while the consumer is expert in application of the product.

The consumer, however, always reserves the right to declare certain materials undesirable in the product composition and to set up tests to determine their presence. He should never stipulate certain materials to be a part of a product. A detergent specification must give the drycleaner the information which will allow him to determine whether he can safely use a given detergent without deleterious effect on his equipment or the clothes he will clean.

With this stipulation in mind, this paper will detail what we believe to be a comprehensive specification for liquid synthetic drycleaning detergents. All requirements are based upon the type of information the drycleaner needs. In some cases, the testing methods are specified, in other instances Committee D-12 will be called upon to arrive at an acceptable means of testing.

* Paper presented at annual meeting, Committee D-12 (ASTM), New York, March 15.

1. Type

The drycleaner should know the type of detergent he has purchased so that he will know how to test its concentration in solution (see Section 11 of this report). Additionally, this will tell him whether it is compatible with his auxiliary drycleaning products as well as his previously used detergent (some or much of which may be in his system when he begins additions of his new detergent).

- A. Anionic drycleaning detergent—a drycleaning detergent which produces negatively charged colloidal ions in solution;
- B. Cationic drycleaning detergent—a drycleaning detergent that produces positively charged colloidal ions in solution;
- C. Nonionic drycleaning detergent—a drycleaning detergent that produces electrically neutral colloidal particles in solution.

Solution referred to would be drycleaning solvent at 75% relative humidity (2) and 75° F.

2. Solubility

A drycleaning detergent (1) must be soluble in the commonly used drycleaning solvents. If it were not, it would be filtered out or it would settle out, possibly on the clothes. Additionally, it must stay in solution at the temperatures likely to be encountered in drycleaning plants. A low would be 35° F. (3) Much below this temperature, severe damage would occur to other equipment in the plant due to freeze-up. A high would be 100° F. (4) Hot summer temperatures combined with the friction of filtration and the lack of solvent coolers may produce temperatures this high or higher.

The drycleaning detergent composition should be completely and easily

soluble at 4% concentration in either (a) petroleum (Stoddard) Solvent or (b) perchlorethylene. All tests would be carried out over a temperature range of 35° F. to 100° F.

Hereafter in this paper all references to drycleaning solvents shall pertain to perchlorethylene and Stoddard solvent.

3. Odor

Odor on a drycleaning garment cannot be tolerated. Since in most drycleaning operations some residue of the detergent is still present on the garment after drycleaning, the detergent is objectionable, if residue emits odor.

- A. The odor of the drycleaning detergent when dissolved at 4% concentration in drycleaning solvents shall not be distinguishable from that of the solvent in which it is dissolved.
- B. Swatches typical of each of the major fibers used for textile purposes (5) when:
 1. Dipped in a 4% detergent solution, centrifuged to 20% (by weight) wet pick-up and dried in a hot tumbler;
 2. Dipped in a 1% detergent solution, centrifuged to 20% wet pick-up and dried in a hot tumbler;
 3. Dipped in a 4% detergent solution, centrifuged to 20% wet pick-up, rinsed in clear solvent, again centrifuged to 20% wet pick-up and then dried in a hot tumbler;
 4. Dipped in a 1% detergent solution, centrifuged to 20% wet pick-up, treated as in 3, and then dried in a hot tumbler;
 5. Dipped in an X% detergent solution, centrifuged to 20% wet pick-up and dried in a hot tumbler;
 6. Dipped in an X% detergent solution, centrifuged to 20% wet pick-up, rinsed in clear solvent, again centrifuged to 20% wet pick-up and then dried in a hot tumblershould not have an odor different from that of blank swatches

dipped only in clean, detergent free solvent and similarly centrifuged and dried.

The solutions referred to could be made with either Standard Solvent or Perchlorethylene or both, depending on the manufacturer's directions for the use of the detergent. Passage of a detergent treated as in B-1 above would also mean that tests B-2, B-3 and B-4 would be passed. However, if a detergent failed to pass B-1 it might still be usable provided it could pass B-2, B-3 or B-4. The detergent should be certified only as to which tests it could pass. This would then tell the cleaner the procedure he must use. Tests B-5 and B-6 would be identical concentrations. They would be the concentration of detergent as specified by the manufacturer, if he specified use of his detergent at a maximum concentration less than 4% but greater than 1%. Tests B-5 and B-6 would be omitted unless required by the manufacturer's specified detergent concentration.

4. Storage Stability

When a drycleaner buys a detergent, he is entitled to know whether it will maintain its original composition until he uses it up completely. Storage stability requirements for a drycleaning detergent need only be as rigorous as the conditions likely to be encountered. This would mean a life of about six months (6) (from manufacture through pre-sale storage and storage during use) and temperatures approximating the normal highs and lows in a drycleaning plant. (7)

- A. The detergent shall be homogeneous and free of any undissolved matter and shall maintain this homogeneous composition after 180 days at 90° F. and 35° F. (Two samples.) When removed from the containers after the test, there shall be no evidence of sedimentation.
- B. There shall be no evidence of decomposition in either sample after the 180 day test.

5. Distillability

The drycleaner has two means of purifying his solvent. One is by filtration, the other by dis-

tillation. If the detergent resists removal by distillation or can be removed by filtration, its use is objectionable.

A 4% solution of the detergent in drycleaning solvent shall be able to be distilled by methods normally applied in the industry and result in a distillate containing only the drycleaning solvent.

6. Filterability

The detergent dissolved at 4% in drycleaning solvent shall not be removed by filtration with diatomaceous earth. It shall not cause the pressure drop across a filter cake (filtering the drycleaning solvent) to rise significantly over that experienced before the detergent was added.

7. Corrosive Effect

A drycleaning detergent should not cause injury to the equipment in which it is to be used. Therefore, it should not corrode any of the normal materials of which equipment is constructed in the drycleaning industry.

- A. Metals—Metals normally used in construction of drycleaning equipment shall pass a corrosion test similar to ASTM method D-30. (8)

"A polished . . . strip is immersed in a given quantity of sample (in this case a 4% detergent solution in drycleaning solvents) and heated at a temperature and for a time characteristic of the material being tested. At the end of the test period, the . . . strip is removed, washed and compared . . ." to a blank run in solvent alone. Among the metals that might be tested are: copper, stainless steel, "Monel" metal, steel, cast iron, brass and such other metals as equipment manufacturers may recommend.

- B. Corrosive effect on plastics and miscellaneous materials of construction. A method similar to that for metals would be used.

8. pH Range

Many dyes on fabrics which are drycleaned will be affected at certain pH values and will change from their original condition. Therefore, the detergent pH range should be limited to that which is safe on most dyes. (9) The detergent shall have a pH in the neutral zone.

9. Effect on Fibers

A detergent to be used in drycleaning fabrics must be harmless to fibers.

Swatches representative of the different classes of fibers normally used in textiles (5) shall on soaking in a 4% solution of the detergent for one hour followed by rinsing in drycleaning solvent and drying show no more deterioration than identical samples immersed in drycleaning solvents alone. A method such as ASTM D 1682-59T—"breaking load and elongation of textile fabrics" (10) might be used as a test of deterioration.

10. Graying

When there is a decrease of over 4% (11) in the reflectance of a fabric, it is visible to the eye and therefore objectionable. If in drycleaning the detergent residue caused this to occur, then use of the detergent would be objectionable. This decrease in brightness is known as graying.

White swatches of wool, acetate, and rayon, when:

- A) Dipped in a 4% detergent solution, centrifuged to 20% wet pick-up, rinsed in clear solvent, again centrifuged to 20% wet pick-up and then dried in a hot tumbler
- B) Dipped in a 1% detergent solution, centrifuged to 20% wet pick-up, rinsed in clear solvent, again centrifuged to 20% wet pick-up and then dried in a hot tumbler
- C) Dipped in an X% detergent solution, centrifuged to 20% wet pick-up, rinsed in clear solvent, again centrifuged to 20% wet pick-up and then dried in a hot tumbler should not show over a 4% decrease in reflectance when tested with a reflectometer. Test C would be at the maximum detergent concentration specified by the manufacturer provided it was less than 4% but greater than 1%. If test A were passed, tests B and C need not be carried out.

11. Concentration

With any detergent, such as a charge type drycleaning detergent, wherein a specific concentration of detergent is kept at all times in the drycleaning solvent, there must be a simple field method of testing concentration.

The detergent in solutions contained from ¼ to 4% detergent in drycleaning solvent shall be measurable in the field by the applicable method for its type.

- A. Anionic—Use method #97 from ASTM Spec. Tech. Publ. 150-A. (13). A refined method appears as Appendix A herewith.
- B. Nonionic—A satisfactory method for this has yet to come to my attention and would be left to the committee to determine.

(Turn to Page 259)

Estimation of

Soil Redeposition by Detergents

By **Albert R. Martin*** and **Richard C. Davis,**

Whirlpool Corp., St. Joseph, Mich.

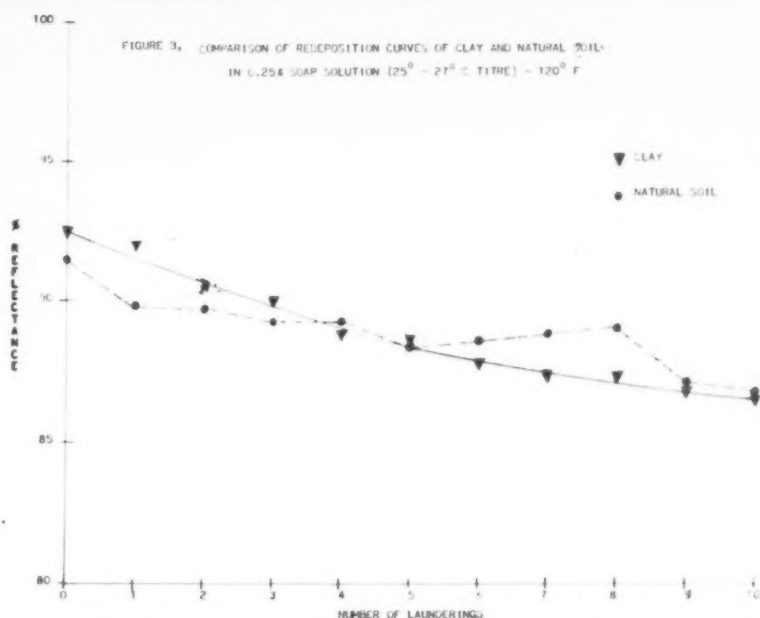
Part II

Experiment 2, Correlation of Clay with Natural Soil in Soap Solutions

It is a well known fact that soap in soft water has excellent suspending power for natural soil. This is confirmed by the data given in Table III covering a redeposition study using 10 successive heavily soiled loads. The soap was 0.25% "Swift" 559, a 25°-27° C titre soap.

The amount of clay used in these experiments was 0.25 g/liter, which we found to give results comparable with heavily soiled loads. This value also corresponds quite well to some measurements we have made of the amount of particulate soil in naturally soiled loads.

If clay is a valid model soil, it should also be suspended by a soap solution to the same degree as natural soil. As shown in Table III and Figure 3, the correlation here between clay and natural



soil is excellent. In both cases, the final reflectance value of 86+ % represents near perfection in whiteness maintenance. We have rarely seen this exceeded for 10 washes with any detergent or combination of washing conditions.

Experiment 3, Comparison of Clay and Natural Soil Against C. M. C.

Any model soil for which a claim for validity is made must be severe in solutions containing a built synthetic detergent that contains no C. M. C. Definite improvement should be observed if C. M. C. is added to the bath.

Again redeposition in a

*Paper presented at annual meeting of Committee D-12 on Soaps and Other Detergents (ASTM), New York, March 14.

Table III. Comparison of Redeposition of Clay vs. Natural Soil in 0.25% Soap Solution

Wash Number	Reflectance of Redeposition Swatches	
	Natural Soil	Clay
Original	91.5	92.6
1	89.8	92.0
2	89.7	90.6
3	89.2	90.0
4	89.2	88.7
5	88.4	88.6
6	88.6	87.7
7	88.8	87.2
8	89.0	87.0
9	87.1	86.5
10	86.5	86.1

Table IV. Redeposition of Clay and Natural Soil in Standard Detergent Solution with No C.M.C.

Wash Number	Reflectance of Redeposition Swatches	
	Natural Soil	Clay
Original	92.7	92.4
1	88.8	90.0
2	89.2	87.9
3	87.9	86.2
4	85.2	84.4
5	85.2	83.4

Table V. Redeposition of Clay and Natural Soil In Standard Detergent Solution Containing 1% C.M.C. (Based on Dry Weight Detergent)

Wash Number	Reflectance of Redeposition Swatches	
	Natural Soil	Clay
Original	94.2	93.1
1	93.7	89.7
2	87.0	88.2
3	88.2	87.5
4	87.3	86.7
5	87.8	86.5

Table VI. Redeposition of Clay and Natural Soil in Standard Detergent Solution containing 5% C.M.C. (Based on Dry Weight of Detergent)

Wash Number	Reflectance of Redeposition Swatches	
	Natural Soil	Clay
Original	93.5	93.1
1	90.6	90.9
2	90.7	90.0
3	89.5	88.7
4	90.4	88.1
5	90.2	87.5

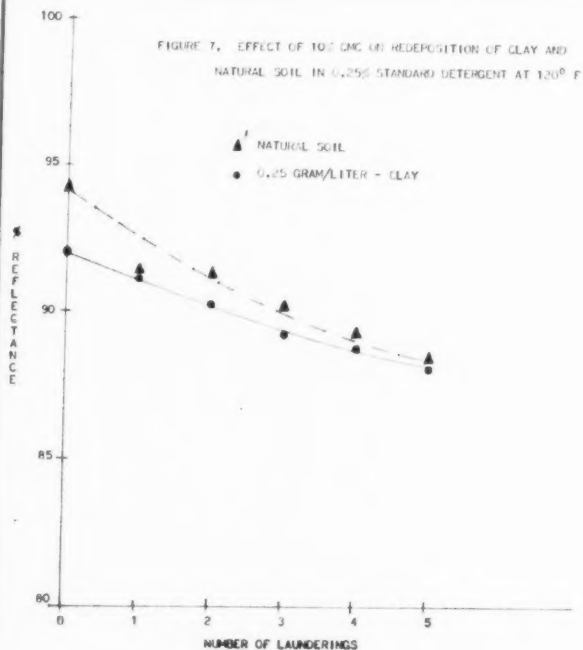
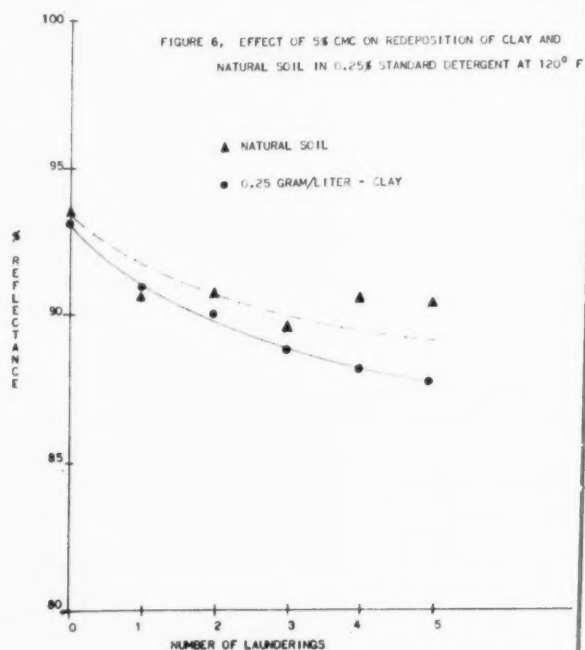
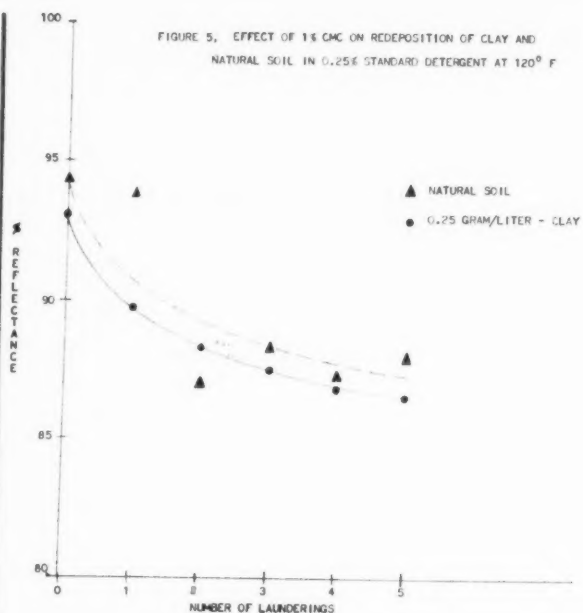
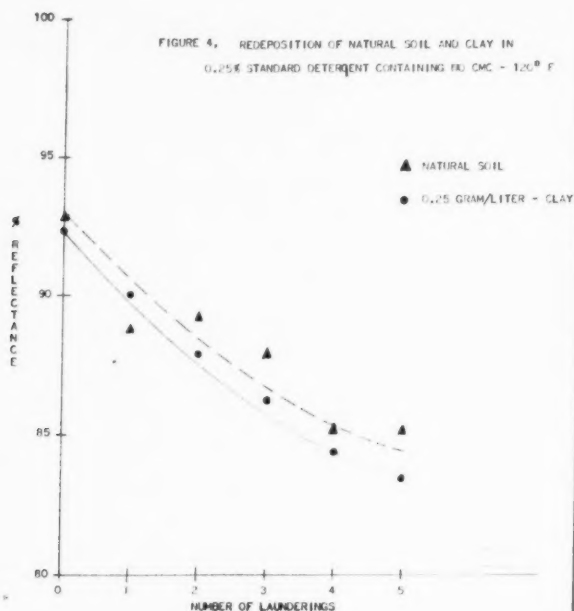


Table VII. Redeposition of Clay and Natural Soil in Standard Detergent Solution Containing 10% C.M.C. (Based on Dry Weight of Detergent)

Wash Number	Reflectance of Redeposition Swatches	
	Natural Soil	Clay
Original	94.2	92.0
1	91.2	91.1
2	91.3	90.2
3	90.1	89.2
4	89.3	88.7
5	88.4	88.1

series of successive washings of moderately soiled clothes loads in home washers was compared with the results with clay suspensions in the "Terg-O-Tometer" using the same washing conditions. The detergent was dry mixed in the laboratory and had the following composition:

	%
Sodium alkylarylsulfonate	20.0
Lauric diethanolamide	2.2
Sodium sulfate	10.8
Tetrasodium pyrophosphate	41.8
Sodium tripolyphosphate	14.0
Sodium silicate (meta)	11.2

The required amount of C. M. C. for each bath was weighed separately and added to the detergent solution. These solutions were agitated for 10 minutes before the loads were added to dissolve the C. M. C.

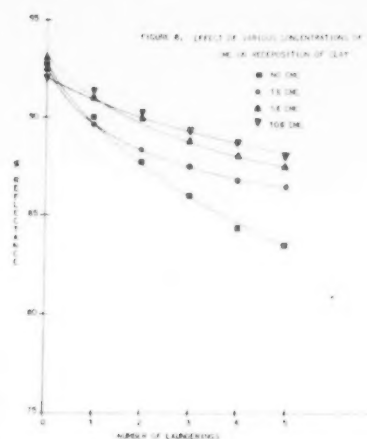
The results are given in Tables IV, V, VI and VII, and shown graphically in Figures 4, 5, 6 and 7. Again the agreement between clay and natural soil is quite good. The scatter of the natural soil data is typical for this kind of experiment. The clay curves fall consistently just below the trend curves for the natural soil data. In Figure 8, the four clay curves are grouped for comparison. There is little advantage to adding more than 1 per cent C. M. C. to the detergent. This observation is certainly in harmony with the general experience of the detergent industry. Thus, again the clay model soil has met the requirement of validity.

Experiment 4,

Effect of Water Hardness

It is certainly an accepted fact of detergency that soil redeposition increases with water hard-

ness. If this is so, a valid model soil must be capable of discriminating between various water qualities. We selected four waters that fairly well cover the extremes as well as an average quality water. These four are: 19 grain well water, 8 grain Great Lakes water,

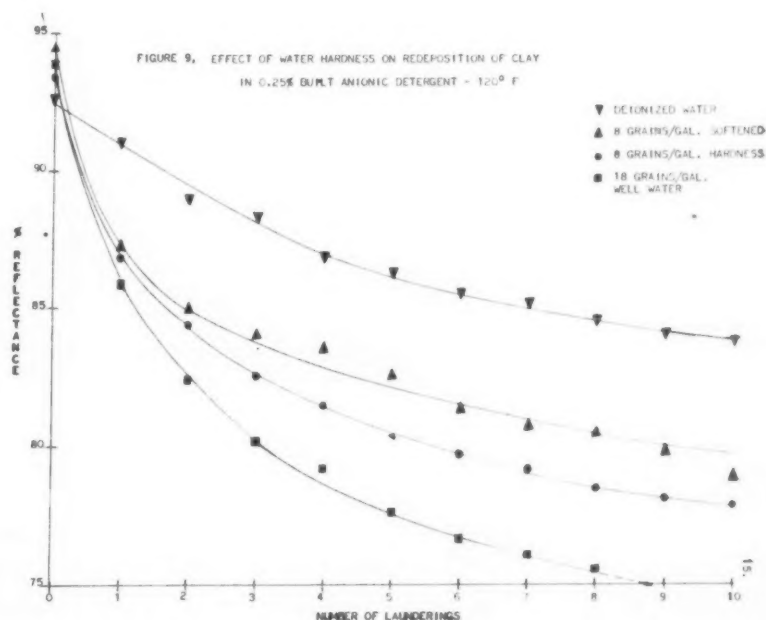


Great Lakes water softened, and deionized water.

The redeposition data for

Table VIII. Reflectances of Redeposition Swatches after Repeated Laundering in Waters of Various Hardnesses

Wash Number	Water Type			
	Deionized	Softened from 8 g/g	8 g/g	18 g/g Well Water
Original	92.9	94.5	93.0	93.8
1	91.0	87.3	86.8	85.9
2	88.9	84.8	84.3	82.3
3	87.8	84.3	82.6	80.2
4	86.8	83.4	81.4	79.2
5	86.4	82.2	80.1	77.7
6	85.6	81.3	79.7	76.5
7	85.2	80.8	79.1	75.8
8	84.5	80.5	78.4	75.4
9	84.0	79.8	78.1	74.9
10	83.9	79.7	77.9	74.2



10 successive washes using 0.25 g/liter of clay are given in Table VIII and plotted in Figure 9. The detergent in this case was a built anionic. We used 0.25% concentration, an amount of this particular detergent that we have repeatedly found to be inadequate to prevent natural soil redeposition in washing heavily soiled loads. The ability of the clay to discriminate between these waters even with an unfavorable soil-detergent ratio being used is quite encouraging.

Experiment 5,

Correlation Between Clay and Natural Soil at Different Soil Concentrations

Correlation between clay and natural soil at one concentration is of course gratifying, but one demands more than this. The correlation must hold over a wide range of soil concentrations if we are to put any dependance in the results. We therefore tested this also. We have already pointed out the wide scatter we get in the data of soil redeposition curves with naturally soiled loads. We have also pointed out that the "Soil Index" can be used to reconcile these data. That is, the redeposition curve goes up and down as the "Soil Index" goes up and down. We decided to match the "Soil Index" values of a series of home loads using clay and see if we could then match the observed redeposition curve. The calibration curve is given in Figure 10

(Turn to Page 255)

Table IX. Soil Indices of Varying Concentrations of Clay in 0.35% Nonionic Detergent

Clay Concentration, grams/liter	Reflectance of Soil Index
0	88.5
0.05	77.2
0.10	69.7
0.15	58.1
0.20	51.6
0.25	43.1
0.30	40.7
0.35	34.9
0.40	34.2
0.45	33.3
0.50	31.8
1.00	30.0

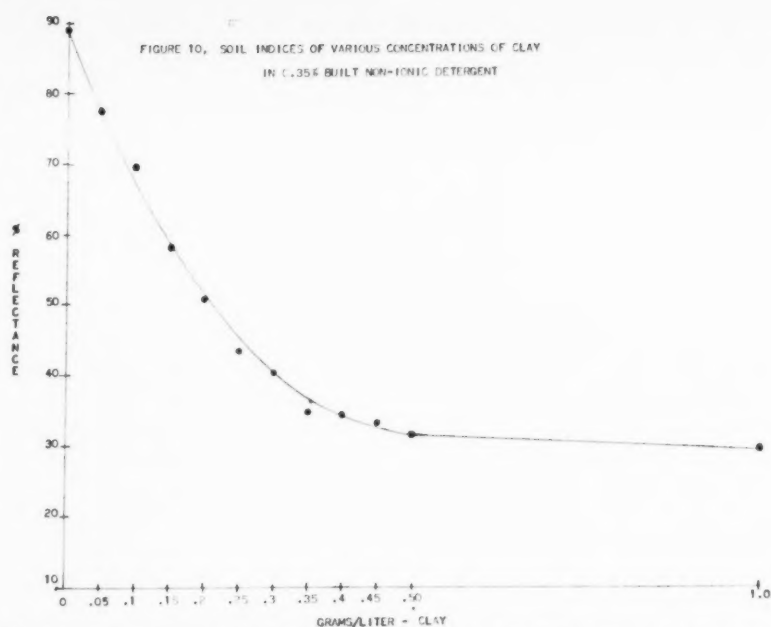
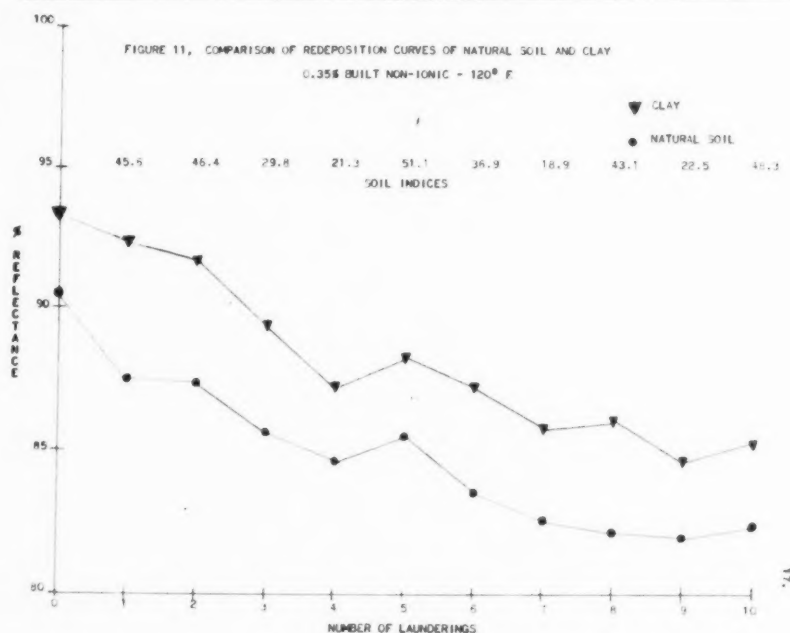
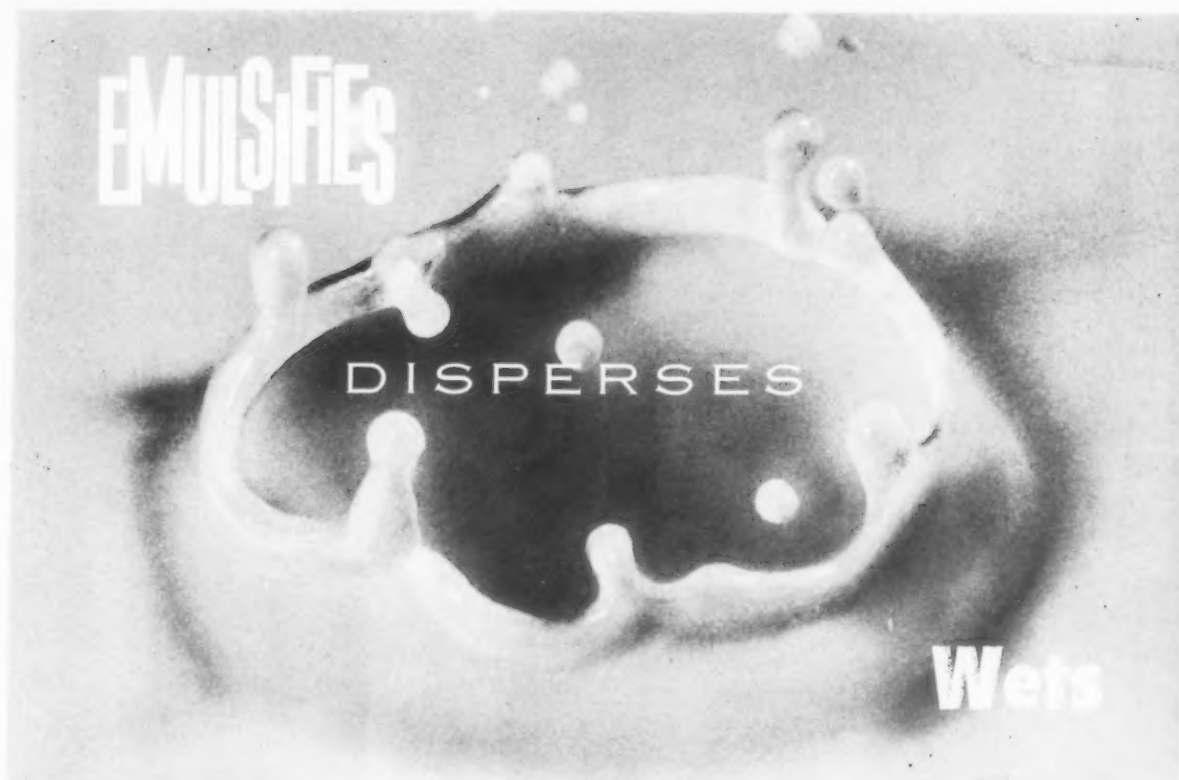


Table X. Comparison of Redeposition of Clay vs. Natural Soil at Constant Soil Index for Each Laundering
Reflectance of Redeposition Swatches

Wash Number	Natural Soil	Clay	Soil Index
Original	90.5	93.2	
1	87.5	92.5	45.6
2	87.4	91.9	46.4
3	85.6	89.4	29.8
4	84.6	87.2	21.3
5	85.5	88.1	51.1
6	83.5	87.2	36.9
7	82.5	85.9	16.9
8	82.1	86.4	43.1
9	81.9	84.6	22.5
10	82.2	85.3	48.3





EMULPHOR®

NONIONIC EMULSIFIERS

These **specialty** surfactants, singly or in combination, have provided the solution to many an emulsification problem.

The Emulphor nonionic emulsifiers, considered as a group, facilitate (and often are the key to) the manufacture and/or finishing of many products, particularly leather, textiles, paper, and polymers; they also improve the performance of many products of the coatings, compounding, and agricultural chemicals industries; they add sales appeal as well to cosmetic and toiletry preparations.

EMULPHOR VN-430

is an **oil-soluble** liquid that tends to form stable W/O and fast-breaking O/W emulsions. It is particularly valuable in the pesticide industry as a component of dormant and summer spray oils and in leather processing for degreasing pickled skins.

EMULPHOR EL-719

features **low toxicity**, so much so that it is used to emulsify pharmaceutical materials. On the other hand, in urethane foam manufacture, this liquid emulsifier promotes the formation of uniform bubbles. As a post stabilizer for pigmented latex systems, it inhibits "prefloc."

EMULPHOR EL-620

also a liquid, is a good all-around emulsifier that has essentially the same properties and applications as its homolog, Emulphor EL-719. However, it differs in hydrophobic-hydrophilic balance and also in that it is **anhydrous**.

EMULPHOR ON-870

is **stable to strong acids and alkalis** and is therefore used in acid degreasing of wool. It is outstanding as an emulsifier of waxes. It is also valuable in emulsion polymerization and in post stabilization of latices.

To learn more about the Emulphor nonionic emulsifiers: Write today for free literature, samples, and technical assistance.



From Research to Reality
ANTARA CHEMICALS
 A SALES DIVISION OF
GENERAL ANILINE & FILM CORPORATION
 435 HUDSON STREET • NEW YORK 14, NEW YORK

SALES OFFICES: New York • Providence • Philadelphia • Charlotte • Chattanooga • Chicago
 Portland, Ore. • San Francisco • Los Angeles. IN CANADA: Chemical Developments of Canada, Ltd., Montreal

Emulphor nonionic emulsifiers manufactured by General Aniline & Film Corp. are sold outside the U. S., by distributors all over the world, under the trademark "Mulgofen."®

ETHYL ALCOHOL

You can get every formula the government approves . . . from U.S.I. Package sizes range from 10,000-gallon tankcars to one-gallon cans. Delivered fast from U.S.I. denaturing plants, warehouses and distribution points throughout the country.

- ▶ Specially Denatured Alcohol — Anhydrous and 190 proof, all formulas.
- ▶ Proprietary Solvent SOLOX® — Anhydrous and Regular.
- ▶ Completely Denatured Alcohol — for industrial use and antifreeze, both formulas anhydrous and regular.
- ▶ Pure Ethyl Alcohol—U.S.P. 190 proof and N.F. Absolute, tax-free and tax-paid.

ETHYL ETHER

You can order U.S.P. Absolute A.C.S., and Technical Refined grades from U.S.I. Shipments from the Tuscola, Ill. plant range from five-gallon drums to 8,000-gallon tankcars. Drums are stacked conveniently at U.S.I. warehouses across the nation.

CHLORINE

CAUSTIC SODA

H_2SO_4

polyethylene resins

AMMONIA



INDUSTRIAL CHEMICALS CO.
Division of National Distillers and Chemical Corp.
99 Park Ave., New York 16, N. Y.
Branches in Principal Cities



On stream...

TRIPOLYPHOSPHATE
*with an analysis
that backs up performance promise!*

Two BENEFITS are yours in this most modern grade of "Tripoly." A special pre-mixing operation "locks in" the phosphoric acid to prevent losses in the calcining process. The result is an extra-high phosphate analysis. A carefully controlled spray-drying and calcining cycle has been designed to make Tripoly that handles easily and blends into packaged detergent products especially well. Compare AA Quality Sodium Tripolyphosphate with the material you currently use.

Samples from our new production are waiting your inspection. Why not write or call?

Chemical Division

The American Agricultural Chemical Company

100 Church Street, New York 7, N. Y.

Top detergent quality in every granule...

**AA QUALITY
SODIUM
TRIPOLYPHOSPHATE**

AA QUALITY SODIUM TRIPOLYPHOSPHATE
AA QUALITY TETRASODIUM PYROPHOSPHATE
AA QUALITY TRISODIUM PHOSPHATE
AA QUALITY DISODIUM PHOSPHATE



KESSLER

ESTERS FOR INDUSTRY

Since



1921

EMULSIFIERS

Glyceryl Monostearate, Diglycol Stearate, Diglycol Laurate,
Propylene Glycol Monostearate, Diethylene Glycol
Monostearate, Polyethylene Glycol Esters

EMOLLIENTS

Isopropyl Palmitate, Isopropyl Stearate,
Butyl Stearate

OPACIFIERS

Glyceryl Monostearate, Glycerol Monostearate,
Diethylene Glycol Monostearate, Polyethylene
Glycol Esters

WETTING AGENTS

Glyceryl Glycol Esters

SOLVENT OILS

Isopropyl Palmitate, Triacetin

FOAM STABILIZERS

VISCOSITY CONTROL AGENTS

Glyceryl Glycol Esters

KESSLER CHEMICAL CO., INC.

East 10th & Center Streets, Philadelphia 35, Pa.

TELEPHONE 4-3385

NEW YORK 17, N.Y.

50 Chambers Street

CO 4-1234

BOSTON 10, MASS.

100 High Street

BO 4-3335

CHICAGO 42, ILL.

7101 Stony Island Avenue

PC 3-3924

DETROIT 27, MICH.

15155 James Cassin Highway

C. L. HORTON CO.

UN 5-2222

MEMPHIS 4, TENN.

P. O. Box 3069

L. E. OFFUTT CO.

JA 5-1351

ST. LOUIS 24, MO.

49 Beaver Drive

ALB. W. FAULEY

WT 3-4200



working on a new cleaner? take a look at PQ SOLUBLE SILICATES

The qualities you obtain from them help to build faster-selling products. PQ Soluble Silicates in powdered or liquid forms owe their superior detergent performance to a combination of alkali and soluble silica.

Check these important advantages . . .

BETTER SOIL REMOVAL—As efficient emulsifiers, deflocculants and suspending agents, PQ silicates are highly effective dirt removers. They boost the cleaning action of synthetic detergents.

PREVENTION OF SOIL REDEPOSITION—Just as important as removing dirt is preventing its redeposition on clean work. With PQ silicates, soil stays out.

PROTECTION AGAINST CORROSIVE ACTION—The soluble silica component in silicates inhibits corrosive attack on metals by synthetic detergents and polyphosphates.



To help in your study of the soluble silicates, we shall be glad to mail data file "PQ Soluble Silicates for Detergent Formulations."

PQ SOLUBLE SILICATES
SODIUM SILICATES • POTASSIUM SILICATES



PHILADELPHIA QUARTZ COMPANY

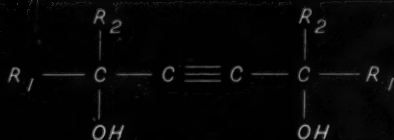
1152 Public Ledger Building, Philadelphia 6, Pa.

Associates: Philadelphia Quartz Co. of Calif. Berkeley & Los Angeles, Calif., Tacoma, Wash.; National Silicates Limited, Toronto & Valleyfield, Canada. Distributors in over 65 cities.

TRADEMARKS REG. U.S. PAT. OFF.

PQ PLANTS: ANDERSON, IND.; BALTIMORE, MD.; BUFFALO, N. Y.; CHESTER, PA.; JEFFERSONVILLE, IND.; KANSAS CITY, KANS.; RAHWAY, N. J.; ST. LOUIS, MO.; UTICA, ILL.

MAY, 1960



Surface Active Surfynols

*can do these important
jobs for you*

Surfynols are unique ditertiary acetylenic glycols which are nonionic, nonfoaming surface active agents. Below are five areas where Airco Surfynols are being used. Perhaps they suggest a use for you.

WETTING — Surfynols 102 and 104 are superior wetting agents. A .1% solution of Surfynol 104 in water has a Draves wetting time of 8 seconds. Even lower Draves times result when Surfynol 104 is combined with surfactants having higher Draves times. Surfynol 104's excellent wetting and defoaming properties provide a basis for using it in paints, metal cleaners, rinse-aid formulations, and insecticides.

DEFOAMING — Surfynol 104 is recommended as a defoamer for aqueous systems. This white waxy material is also available in two liquid forms: Surfynol 104E (50% active in ethylene glycol solution) and 104A (50% active in 2-ethyl hexanol). At about .2% concentration, Surfynol 104A or 104E cuts foam in such systems as emulsion paints, paper coatings, and insecticide formulations.

DISPERSING — Surfynol TG fits the requirements of a non-ionic dispersant for emulsion paints and other emulsion and water-based systems. TG is an 83% active mixture of a Surfynol and an alkyl phenyl ether of polyethylene glycol in ethylene glycol solution. It promotes increased hiding power and better color development in emulsion polyvinyl acetate, acrylic or butadiene-styrene paints.

VISCOSITY CONTROL — Surfynol 82 (dimethyl octynediol) is most active as an anti-gelling agent. In addition to its use in shampoos, Surfynol 82 is recommended for viscosity reduction in vinyl plastisols, aqueous starch solutions, and flexographic inks.

VOLATILE WETTING — Surfynol 61 (dimethyl hexynol) is a volatile wetting agent. Surfynol 61's volatility permits easy elimination from a system after its work is done. One example is in glass cleaning formulations where Surfynol 61 helps solubilize dirt but leaves no film on the glass after cleaning.

INVESTIGATE SURFYNOLS if lower cost surfactants have not proven satisfactory. Airco's experienced technical representatives are always ready to assist you. For on-the-spot help or information call or write.



AT THE FRONTIERS OF PROGRESS YOU'LL FIND . . .

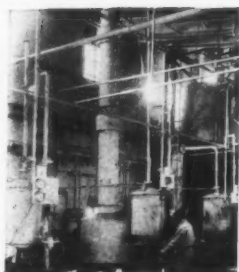


AIR REDUCTION CHEMICAL COMPANY

Represented Internationally by Airco Company International
Divisions of Air Reduction Company, Incorporated
150 East 42nd Street, New York 17, N. Y.

The art of producing interesting fragrances is composed, not only of the gifted use of ingredients, but also of the combined imaginative use of individuals and specialized equipments.

The Verley organization combines *ability* and *experience*, to furnish to you the "different" product we believe you are looking for.



check first with

Verley

Albert
Verley & Company



1375 EAST LINDEN AVENUE, LINDEN, NEW JERSEY
1018 S. WABASH AVENUE, CHICAGO 5, ILLINOIS
21 EAST 40th STREET, NEW YORK 16, NEW YORK
MEFFORD CHEMICAL CO.
5353 JILSON STREET, LOS ANGELES 22, CALIF.
AROMESCENCE INC.
10 RUE PERGOLESE, PARIS 10, FRANCE



- Synthetic Aromatic Products and Chemicals
- Bouquets and Finished Compositions
- Synthetic Flower Oils and Aromatic Bases
- Essential Oils



THIS MUCH BIGGER

FLUFF

ADD 30% MORE BULK TO YOUR BOX OF DETERGENT AT NO EXTRA COST

Put Hooker spray-dried phosphates into your detergents and you get 20% to 30% more bulk (depending on the amount used) without increasing weight or cost. That's because a tiny air bubble floats inside each phosphate granule.

This bulky phosphate bulks up your mixture. You get a bigger box, with more sales attraction.

FREE-FLOWING The high air content of spray-dried phosphates keeps them always loose. They dissolve two or three times faster than common forms.

MEETS ALL NEEDS Choose the spray-dried phosphate

that serves you better—sodium tripolyphosphate or tetrasodium pyrophosphate.

For more information on how to make better detergents by using these phosphates, write to the address below.

You can get the following in regular density: disodium phosphate, trisodium phosphate, sodium hexametaphosphate, and sodium tripolyphosphate.

HOOKER CHEMICAL CORPORATION

Phosphorus Division, Box 326, Dept. SC-5

Jeffersonville, Indiana. Other Sales Offices:
Chicago, Illinois, New York, N. Y.



COSMETIC QUALITY NONIONICS

Alcolac offers commercial quantities of the following nonionics, under the tradename SIPONIC:

<u>BASE</u>	<u>NAME</u>	<u>SUGGESTED USES</u>
Lauryl	L3	Thickener for shampoo and bubble bath Emulsifier for creams and lotions
Oleyl	Y150, Y500, Y501	Emulsifiers for waxes Stabilizers for latices
Tallow	E3, E4, E5	Textile lubricants and finishes
----	R	Emulsifiers for bath oils
----	CD	Detergent for clothes and floors Additive for wax strippers

All Alcolac nonionics are handled with the same care as our other surfactants, assuring:

1. Cosmetic quality
2. Uniformity of composition
3. Analysis of every batch
4. Specifications mutually agreed upon

We are willing to help you develop special surfactants for your particular use. Laboratory facilities are available for development purposes. As little as 2,000 pounds of product can be made commercially.

AMERICAN ALCOLAC CORPORATION

3440 FAIRFIELD ROAD
BALTIMORE 26, MARYLAND
ELGIN 5-2600

1193 Raritan Road
Clark, New Jersey
Fulton 1-1900

6 North Michigan Avenue
Chicago 2, Illinois
Franklin 2-7016

2055 Mountain Street, Room #3
Montreal, Quebec, Canada
Victor 5-6380

American Alcolac Corporation
3440 Fairfield Rd.
Baltimore 26, Maryland

Please send:

Sample of
Product

Information on
Product

Application

Name

Company

Address

City



AMERCHOL Lanolin Derivatives

add specific new functional properties to lanolin's most active components

AMERCHOL Derivatives and lanolin do have a common denominator, but the similarity ends there. AMERCHOL Derivatives add special properties and specific functional effects to lanolin's most active components. These unusual materials provide the formulating chemist with valuable new tools for producing superior cosmetic and aerosol products.

moisturizer

AMERCHOL L-101[®]—powerful *free-sterol* depressant of interfacial tension. Excellent auxiliary emulsifier. Adds gloss, soft textures, and superb emollience to formulations and imparts valuable moisturizing effects to the skin.

solubilizer

SOLULANS[®]—*ethoxylated derivatives*. Water soluble, yet emollient! Solubilizers of great general utility. Impart excellent plasticizing, lubricating, and conditioning qualities at low concentrations.

Complete technical data, samples and suggested formulas are available from our research laboratories.

penetrant

ACETULAN[®]—*acetylated lanolin alcohols*. Non-oily hydrophobic liquid emollient. Penetrates and lubricates leaving a persistent soft after-feel that is truly remarkable.

emollient

MODULAN[®]—*acetylated lanolin*. Our own patented product. An unusual hypo-allergenic emollient. Non-tacky, oil soluble, and hydrophobic. Excellent for emulsions, soaps, baby oils, and brilliantines.

liquid lanolin

VISCOLAN[®]—*dewaxed lanolin*. Supplies all the natural benefits of lanolin in intensified, convenient liquid form. Oil-soluble, low odor and color.

unsaturate

POLYLAN[®]—*essential polyunsaturate*. Liquid wax ester. Combines the natural benefits of linoleic acid with the softening, protective, and conditioning properties of lanolin's most active components.



AMERICAN CHOLESTEROL PRODUCTS, INC.
Amerchol Park • Edison, New Jersey



To sample all these advantages
in one alkali...

Get your **SAMPLE** of

You have *eleven good reasons* (count 'em!) for specifying Snowflake® or Snowfine® in processes and products—ranging from household and industrial cleansers to luxury bath preparations. You may even discover that these two granulations of Solvay® sesquicarbonate of soda offer you more features. Write for your liberal sample.



Sodium Nitrite • Caustic Soda • Calcium Chloride • Chlorine • Chloroform
Caustic Potash • Potassium Carbonate • Sodium Bicarbonate • Soda Ash
Ammonium Chloride • Methyl Chloride • Ammonium Bicarbonate • Vinyl
Chloride • Methylene Chloride • Cleaning Compounds • Hydrogen Peroxide
Aluminum Chloride • Mutual® Chromium Chemicals • Snowflake® Crystals
Monochlorobenzene • Ortho-dichlorobenzene • Para-dichlorobenzene
Carbon Tetrachloride



SOLVAY PROCESS DIVISION
61 Broadway, New York 6, N. Y.

SOLVAY branch offices and dealers are located in major centers from coast to coast. Send expert inquiries to Allied Chemical International, 40 Rector St., N. Y. 6.

SOLVAY PROCESS DIVISION
Allied Chemical Corporation
61 Broadway, New York 6, N. Y.

81-50

Please send without cost:

- ☐ A. Snowflake Crystal sample ☐ B. Snowfine sample
☐ C. Snowflake fact book
☐ Data on how these products can help my operation,
described in attached letter.

Name _____

Position _____

Company _____

Phone _____

Address _____

City _____ Zone _____ State _____

BY EWING GALLOWAY, N. Y.



This chick

IS OFF BRAND X

The ingredients were wonderful. The package a marvel. But never again. That is usually Miss America's reaction when she has bought a preparation that is not properly scented.

That may be your clue to lagging sales. May we help you? Perry fragrances have helped transform many *acceptable* products into *desirable* products. Perhaps your preparations need the Perry touch. Our modern laboratories and expert perfume chemists are at your service. We welcome the opportunity to submit appropriate samples.



PERRY BROS., INC.

61-14 32nd Ave., WOODSIDE 77, NEW YORK
RAvenswood 1-3636

"Manufacturing Perfume Chemists"

Chemical Specialties . . .

Specialties

Automotive products

Chemicals

Food products

Industrial products

Pharmaceuticals

Plastics

Textiles

Waxes

Other products and services

Specialties

Specialties

Specialties

Specialties

Specialties

Specialties

Specialties

Specialties

Specialties

Specialties

Specialties

Specialties

Specialties

Specialties

Specialties

Specialties

Specialties

Specialties

Specialties

Specialties

Specialties

Specialties

Specialties

Specialties

Specialties

Specialties

Specialties

Specialties



Specialties Chemicals Co. is a leading manufacturer of specialty chemicals for the automotive, food, and industrial markets. The company's products are used in a wide range of applications, from automotive fluids to food preservatives. For more information, please contact us at 1-800-555-1234.

Sell her with *Fragrance*

DETERGENTS

COSMETICS

POLISHES

SOAPS

AEROSOLS

INSECTICIDES

Perfume plays an important part in your sales program. Recognize the importance of the right fragrance, custom-designed to sell your product to your customers.

Seek out the sound marketing knowledge, superior creative talents, and the long experience of the master perfumers at IFF. They will develop the scent that is needed to give your product the impelling sales appeal required to make the grade in today's market.

IFF is geared to serve you best—throughout the world.



van Ameringen-Haebler *division*

INTERNATIONAL FLAVORS & FRAGRANCES INC.

521 West 57th St. • New York 19, N. Y.

Leading Creators and Manufacturers in the World of Fragrance

ARGENTINA AUSTRIA BELGIUM BRAZIL CANADA ENGLAND FRANCE GERMANY HOLLAND INDONESIA ITALY NORWAY SOUTH AFRICA SWEDEN SWITZERLAND



WAXES

AIR FRESHENERS

DISINFECTANTS

SPECIALTIES

NO
LIPPING
PLEASE

**BEST
SELLERS**
start with
**BEST
INGREDIENTS**

*If your formula
includes a germicide,
make sure it's*
Roccal®



ROCCAL the first quaternary ammonium germicide, and first in quality and performance, is accepted by leading specialty manufacturers as the "standard."

This high potency, high speed germicide does what is claimed for it . . . kills STAPH and a broad range of other bacteria and kills them faster . . . in recommended low concentrations.

ROCCAL is made like a fine pharmaceutical by one of the world's leading drug product manufacturers. It can be depended upon for superior germ killing action in detergent-sanitizers, cosmetics, pharmaceuticals, algicides, sanitizers,

and many other chemical specialties.

To make your products **BEST SELLERS**, start with the best ingredients and in germicides that means **ROCCAL**. Let us work with you to make your products sell better.

WRITE, PHONE, WIRE for our representative to call or for full written data and prices. **NO OBLIGATION**

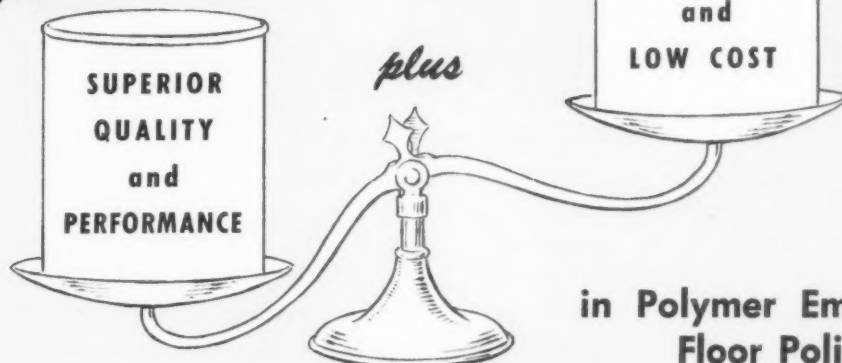
Sterwin Chemicals, Inc.

Subsidiary of Sterling Drug Inc.
1450 Broadway, New York 18, N. Y.
LAckawanna 4-6400

SOAP and CHEMICAL SPECIALTIES

- ✓ Mr. Manufacturer
- ✓ Mr. Private Label Packager

You get...



in Polymer Emulsion
Floor Polish ...
by just adding COLD WATER to

SIMPLEX-40

... THE REVOLUTIONARY FINISHED POLISH
CONCENTRATE AT 40% SOLIDS!

FLEXIBLE SIMPLEX-40 GIVES BIG LIFT TO WAX CHEMIST

This basic film
forming polymer
can be modified
to suit individual
requirements.

DOUBLE CHECK THESE ADVANTAGES OF SIMPLEX-40!

- ✓ Eliminates formulating problems . . . quality control headaches.
- ✓ Assures finishes of superior quality and performance — all raw material ingredients tailor-made to fit product.
- ✓ Requires no special equipment — relieving space and facilities for manufacture of other materials.
- ✓ Reduces freight, handling and storage costs by purchase of single material instead of eight or ten ingredients.
- ✓ Minimizes inventory requirements.
- ✓ Provides flexibility of modification to formulator desiring a specific film hardness, buffability, odor, etc.



SIMPLEX-40 BOOKLET, giving complete information . . . with dilution formulas and how-to-use detailed, available upon request.

Mail this coupon TODAY to get FREE BOOKLET and SAMPLE of SIMPLEX-40.



T. F. WASHBURN Company

Manufacturers of basic raw materials and a complete line of Floor Finishing and Maintenance Products since 1886.

2244 ELSTON AVENUE • CHICAGO 14, ILLINOIS

T. F. WASHBURN COMPANY
2244 Elston Ave., Dept. SC 260, Chicago 14, Ill.

Please send:

- ☐ SIMPLEX-40 BOOKLET.
- ☐ SAMPLE OF SIMPLEX-40.

Buyer's Name _____

Firm _____

Address _____

City _____

State _____

COMPILATION OF LABELING LAWS AND REGULATIONS FOR HAZARDOUS SUBSTANCES . . .

Edited by John D. Conner and Robert L. Ackerly

QVER 145 pages, a compilation of laws and regulations of all states having precautionary labeling laws, also New York City, and including the Federal Caustic Poison Act and the CSMA Model Hazardous Substances Act for Retail Packages with latest revisions. Page size, 8½ x 11, punched for insertion in standard three-ring binder.

The compilation comprises 120 pages in the basic edition plus 25 pages of recent revisions in laws and regulations.

Price of complete compilation including revisions . . .

To members of CSMA	\$5.00 postpaid
To non-members	\$7.00 postpaid

* * *

Price of new 25 page revisions alone . . .

To members of CSMA	\$2.00 postpaid
To non-members	\$3.00 postpaid

For further information, write to

A. A. Mulliken,
Secretary



Chemical Specialties Manufacturers Association, Inc.

50 East 41st Street

George W. Fiero, President

New York 17, N. Y.

H. W. Hamilton, Executive Vice-president

Charles E. Beach, 1st Vice Pres.

Charles E. Allderdice, Jr., 2nd Vice Pres.

Frederick G. Lodes, Treasurer

A. A. Mulliken, Secretary

For A Sales Glow: Silicones



Quick, Deep, Lasting Gloss Keeps Your Polishes Popular

It takes more than a single ingredient to make a successful polish. It takes a lot of formulating skill and sound marketing decisions, too. But among all the variables, this factor remains constant: *including Dow Corning Silicones in your product pays off, literally.* This is true whether your polish is for glass, autos, furniture, appliances . . . silicone fluids improve the formulation — help increase sales.

Dow Corning silicone fluids make polishes easier to spread . . . quicker to shine-up . . . richer and deeper in gloss . . . longer lasting. Silicones repel water in a really superlative manner . . . resist spotting . . . withstand weathering and oxidation, too.

Taken together, these qualities mean less effort, less time and better results for the consumer. That in turn means a better product image for you . . . more of those all-important repeat sales. To get the maximum in consumer desire-to-buy, give Dow Corning Silicones a prominent place in your polish . . . and on your labels, too. Consumers are aware of the protection silicones provide . . . are sold on products that contain them!

Dow Corning development chemists have compiled extensive information on silicone fluids in polishes — are continually working to develop new products for new applications. For the latest and most complete information on Dow Corning Silicones for different types of polishes, contact our nearest branch office or write Dept. 2505.

Your nearest Dow Corning office is the number one source for information and technical service on silicones.



Dow Corning CORPORATION
MIDLAND, MICHIGAN

ATLANTA BOSTON CHICAGO CLEVELAND DALLAS LOS ANGELES NEW YORK WASHINGTON, D. C.

There's something
different about

The word "Dreyer" is written in a large, elegant, white cursive script. It is centered within a solid black rectangular background.

They call us old hands at this business. A good many years of
"depending on Dreyer" have built our background of helping you.
We have never grown old, however. Here at Dreyer, we *think* young.

Today there's new drive at Dreyer. We are a vigorous, modern
organization with young, look-forward ideas. Up-to-date
thinking here . . . thinking ahead . . . is pulling double harness
with experience. The team's working hard and well.

So depend on Dreyer more than ever.

We can help you and save you money.

ESSENTIAL OILS • AROMATIC CHEMICALS
PERFUME COMPOUNDS • FLAVORS

Get the essential quality you require from

P. R. Dreyer Inc.
Serving You Since 1920

601 West 26th Street, New York 1, N. Y.

A large, dark, stylized wave or ribbon shape that curves upwards from the bottom left towards the top right. The word "DREYER" is written in a bold, white, sans-serif, all-caps font, positioned horizontally across the middle of this shape. Above the wave, the "Dreyer" logo in a black box is visible.



George W. Fiero,
president



Charles E. Beach,
first vice-president



Charles E. Allderice, Jr.
second vice-president

CSMA Meeting in Chicago

TWO days of intensive discussion of the latest technological, legislative and marketing developments affecting chemical specialties got under way in Chicago May 16. The occasion was the 46th midyear meeting of the Chemical Specialties Manufacturers Assn. Preceding the formal opening of gathering at the Drake Hotel the Board of Governors of CSMA and numerous committees and subcommittees of the association met, literally, morning, noon and night on May 15. At these meetings future activities were discussed and reports were heard of programs undertaken and contin-

uing since the annual convention last December.

Partial answers, at least, are expected to be provided to some of the questions posed as a result of the recently effective Food Additives Amendment to the Federal Food, Drug, and Cosmetic Act. On hand to shed some light on this law, which vitally affects most chemical specialties, will be J. Kenneth Kirk, Assistant to the Commissioner, Food and Drug Administration. He will discuss "Food Additives" at the general session, the morning of May 18. In addition, at a joint session of two CSMA divisions, Detergent and Cleaning

Compounds and Disinfectants and Sanitizers, a "Food Additives Orientation Seminar" is scheduled.

Another representative of the Federal government, Earl Kintner, chairman of the Federal Trade Commission, is to speak on "Responsibilities of Government and Business in Our Free Market Economy" at group luncheon, May 17.

Other highlights of the 46th midyear meeting of CSMA includes a symposium on "Pharmaceutical Aerosols", sponsored by the Aerosol Division. Scheduled for discussion at this sole divisional meeting the afternoon of May 17 are such

(Turn to Page 100)

Frederick G. Lodes,
treasurer



Alfred A. Mulliken,
secretary



H. W. Hamilton,
executive vice-president



46th midyear meeting program Chemical Specialties Mfrs. Assn. Hotel Drake Chicago, May 16-18

Monday, May 16

9:00 A.M. — Board of Governors Meeting
Committee Meetings

Tuesday Morning, May 17 Automotive Division

Georgian Room
C. A. Weslager, presiding

9:00 A.M.

Report of Nominating Committee; Election of Division Executive Board for 1961

"Antifreeze Performance Testing — Progress Report, Including Aluminum Corrosion Studies," by F. A. Gundlach, C. N. Moore, and E. A. Zientek, Union Carbide Chemicals Co., New York, to be presented by F. A. Gundlach

"Marketing and Merchandising," by Paul Francois, Merchandising Consultants, Inc., Newark, N. J.

"New Trends in Modern Packaging," by B. H. Morgan, Continental Can Co.

"How to Write Labels Under New State Laws from Point of View of Toxicity," by John H. Foulger, consultant, Wilmington, Del.

Detergent and Cleaning Compounds

Division

Walton Room
W. S. Jessop, presiding

9:00 A.M.

Address of Division Executive Board Chairman, W. S. Jessop, U. S. Sanitary Specialties Corp., Chicago
Report of Nominating Committee; Election of Division Executive Board for 1961

"New Surfactant Development," by Donald Price, consultant, New York

"Corrosion of Equipment as Related to Clean Practices," by Howard Francis, Armour Research Foundation, Chicago

"Hospital Infections Control," by Harry B. Harding, M. D., Evanston Hospital, Evanston, Ill.

"A Reproducible Method for Evaluating Hard Surface Cleaners," by Raymond L. Liss and Thomas B. Hilton, Monsanto Chemical Co., St. Louis, to be delivered by R. L. Liss

Disinfectants and Sanitizers Division

Room M-18
C. J. D'Angio, presiding

9:00 A.M.

Address of the Division Executive Board Chairman, C. J. D'Angio, Airkem, Inc., New York
Report of Nominating Committee; Election of Division Executive Board for 1961

Symposium on "Value of Consulting Laboratories to the Chemical Industry" — L. S. Stuart, Pesticide Regulation Section, U. S. Department of Agriculture, Washington, D. C., moderator: a. "How to Use a Consultant," by A. Haldane Gee, Foster D. Snell, Inc., New York; b. "The Value of Consulting Laboratories to Producers of Products for Maintenance and Sanitation," by Perry G. Bartlett, West Chemical Products Inc., Long Island City, N. Y.; c. "Value of Consulting Laboratory to the Chemical Industry," by B. Shapiro, Hudson Laboratories, Inc., New York; d. "What We Expect from Consultants," by Irving

Gaines and Arnold Lada, Onyx Oil & Chemical Co., Jersey City, N. J.

Insecticide Division

Grand Ball Room
Alfred Weed, presiding

9:00 A.M.

Address of Division Executive Board Chairman, Alfred Weed, Olin Mathieson Chemical Corp., Asheville, N. C.
Report of Nominating Committee; Election of Division Executive Board for 1961

"Developments in the Administration of Public Law 86-139," by John T. Coyne, Pesticide Regulation Section, U. S. Department of Agriculture, Washington, D. C.

"Visual Aids in Household Insect Control," by M. P. Jones, Extension Entomologist, U. S. Department of Agriculture, Washington, D. C.

"Radioactive Tracer Work to Determine Possible Residues in Milk and Meat from Dairy Sprays," by L. A. Cutkomp, Department of Entomology, University of Minnesota

Waxes and Floor Finishes Division

French Room
Earl Brenn, presiding

9:00 A.M.

Address of the Division Executive Board Chairman, Earl Brenn, Huntington Laboratories, Inc., Huntington, Ind.
Report of Nominating Committee; Election of Division Executive Board for 1961

"Viscoelastic Properties of Films Prepared From Emulsion Type Surface Care Formulations," by Kurt Gutfreund, Armour Research Foundation, Illinois Institute of Technology

"Comparison of Copolymers and Mechanical Mixtures of Polymers in Floor Polish," by Henry Merken and R. J. Stankus, Polyvinyl Chemicals, Inc., Peabody, Mass., to be delivered by H. Merken

"Evaluating Synthetic Finishes for Resilient Flooring — Some Views and Comments," by George Robertson, Equitable Life Assurance Society of the United States, New York

Report of the Scientific Committee, by Gerard R. De Napoli, Masury-Young Co., Boston, chairman

Report on the Annual Survey of Polishes, Finishes, and Cleaners, by Daniel Schoenholz, Foster D. Snell, Inc., New York

Tuesday Afternoon, May 17

12:25 P.M.

Luncheon — Gold Coast Room — George Fiero, presiding
"Responsibilities of Government and Business in Our Free Market Economy," by Hon. Earl Kintner, chairman, Federal Trade Commission, Washington, D. C.

Tuesday Afternoon, May 17

Aerosol Division

Grand Ball Room
E. J. McKernan, presiding

2:15 P.M.

Address of Division Executive Board Chairman, E. J. McKernan, E. J. McKernan Co., Elgin, Ill.

Report of Nominating Committee; Election of Division Executive Board for 1961

Symposium on "Pharmaceutical Aerosols": "Package

Development of Ethical Pharmaceuticals," by John J. Graham, Schering Corp., Bloomfield, N. J.; "Sterile Filling of Aerosol Containers," by Carl Stearns, American Cyanamid Co., Bound Brook, N. J.; "The Filler's Role in Filling Pharmaceutical Aerosols," by Albert Mason, John C. Stalford & Sons, Inc., Baltimore; "Aerosol Inhalation Therapy," by John J. Sciarra, St. John's University, College of Pharmacy, Queens, N. Y.; "Market Potential for Pharmaceutical Aerosols," by Henry Holloway, General Chemical Division, Allied Chemical Corp., New York

Tuesday Evening, May 17

5:30 to 9:00 P.M.

Company "Open House"

6:00 P.M. to 1:00 A.M.

"Club CSMA"—Hotel Knickerbocker

Wednesday Morning, May 18

General Session

Grand Ball Room

Charles E. Beach, presiding

10:00 A.M.

Report of Secretary, by A. A. Mulliken

Report of Treasurer, by Fred G. Lodes, Lodes Aerosol Consultants, New York

Report of CSMA Counsel, by John D. Conner, Cummings, Sellers, Reeves & Conner, Washington, D. C.

Address by CSMA President, by George W. Fiero, Esso Standard Oil Co., New York

"Food Additives," by J. Kenneth Kirk, Assistant to the Commissioner, Food and Drug Administration, Department of Health, Education and Welfare, Washington, D. C. G. Herbert True, Creativity Research and Visual Research, Inc., Chicago, subject yet to be announced

Wednesday Afternoon, May 18

12:25 P.M.

Luncheon—Gold Coast Room—Charles E. Allderice, Jr., presiding

Sesquicentennial Celebration of Metal Container. Citation to Aerosol Division, presented by Roger Hepenstal, president of Metal Container Institute; acceptance by George W. Fiero.

"Laughter—The Secret Weapon," by Ira Wermont.

Aerosol Division

French Room

E. J. McKernan, presiding

2:15 P.M.

Annual Product Survey, by E. E. Husted, Union Carbide Chemicals Co., New York, chairman of Aerosol Survey Committee

"Safe Use of Hydrocarbon Propellants," by Montford A. Johnson, Peterson Filling and Packaging Co., Danville, Ill.

"Mechanism of the Reaction Between Trichloromono-fluoromethane and Ethyl Alcohol," by Paul A. Sanders, E. I. du Pont de Nemours & Co., Wilmington, Del.

"Market Potential for Aerosol Powders," by E. E. Husted, Union Carbide Chemicals Co., New York

Report of Market Development and Publicity Committee, by J. J. Tomlinson, General Chemical Division, New York, chairman

Presentation by Norman Odell, Norman Odell Associates, New York

Report of Scientific Committee, by W. C. Beard, Jr., Risdon Manufacturing Co., Naugatuck, Conn., chairman

Automotive Division

Georgian Room

C. A. Weslager, presiding

2:15 P.M.

Address of the Division Executive Board Chairman, C. A. Weslager, E. I. du Pont de Nemours & Co.

Symposium on "Publicity and Marketing Aids for Automotive Specialties": a. "How We Arrived at Publicity to Supplement our Promotional Program," by J. W. Goetz, Union Carbide Chemicals Co.; b. "Our Current Publicity

Program," by Paul B. Zucker, Ruder and Finn, Inc., New York; c. "The Future of Publicity as Marketing Aid," by J. M. Hogrefe, Union Carbide Chemicals Co.

Report of Brake Fluid Committee, by Donald H. Hanson, R. M. Hollingshead Corp., Camden, N. J., chairman

Report of Products Committee, by J. M. Russ, Union Carbide, chairman

Report of Special Committee on Hazardous Labeling Laws, by C. M. White, Olin Mathieson Chemical Corp., chairman

Report of Antifreeze Committee, by J. C. Crawford, Commercial Solvents Corp., New York

Report of Scientific Committee, by Myron Frank, Dow Chemical Co., Midland, Mich., chairman

Report of Program Committee, by A. S. Tongue, Olin Mathieson Chemical Corp., chairman

Insecticide Division

Grand Ball Room

Alfred Weed, presiding

2:15 P.M.

"Insecticidal and Toxicological Properties of DDVP (0,0 Dimethyl-2,2-Dichloro Vinyl Phosphate)," by Ralph L. Tracy, Norda Essential Oil and Chemical Co., New York

"Weed Control and Public Reaction," by Jack Dressen, National Agricultural Chemicals Association, Washington, D. C.

"Pesticide Formulations," by Garth Coombs, Celite Division of Johns-Manville Products Corp., New York

"Recent Developments in Insecticides for the Control of Medically Important Arthropods," by Dr. Herbert S. Schoof, U. S. Public Health Service, Technical Development Laboratories, Savannah, Ga.

"Method for Determining Lethane Residues in Milk," by Charles F. Gordon, John Barker, Linwood Haines, and Arthur Wolfe, Rohm & Haas Co., Philadelphia. To be delivered by C. F. Gordon

Waxes and Floor Finishes Division

Room M-18

Gerard R. DeNapoli, presiding

2:15 P.M.

"Carnauba Wax, Its Molecules vs. Performance," by L. M. Prince, Reichhold Chemicals, Inc., Elizabeth, N. J.

"Scientific Proof of the Value of Waxing Resilient Smooth Surface Floor Covering," by W. J. Hackett and C. S. Kimball, Foster D. Snell, Inc., New York. Delivered by W. J. Hackett.

"Preparation of Nonionic Emulsions of Polyethylene Wax," by M. O. Brunson and Lawrence D. Queen, Eastman Chemical Products, Inc., Kingsport, Tenn. Delivered by M. O. Brunson

"Film Studies of Floor Polishes Based on a New Styrene Copolymer Latex," by H. L. Pfluger and C. G. Geblein, Borden Chemical Co., Philadelphia.

Report on Special Wax Research and Publicity Fund, by W. S. Hackett and C. S. Kimball, Foster D. Snell, Inc.

Detergent and Cleaning Compounds

Division & Disinfectants and

Sanitizers Division

Joint Session

Walton Room

Lester D. Berger, Jr., presiding

2:15 P.M.

"Food Additives Orientation Seminar"—Robert I. Ackery, Cummings, Sellers, Reeves & Connor, Washington, D. C.; moderator; panelists: John T. Coyne, Pesticide Regulation Section, U.S.D.A.; Arnold Lada, Onyx Oil & Chemical Co., Jersey City, N. J.; E. R. Weidlein, Jr., Union Carbide Chemicals Co.; C. Boyd Shaffer, American Cyanamid Co., New York

Wednesday Evening, May 18

6:00 P.M. Cocktail Party—Grand Ball Room

7:30 P.M. Banquet and Entertainment—Gold Coast Room

(From Page 98)

subjects as market potential, package development, application, filling techniques, and the role of the custom loader.

Aerosol sales figures for 1959 will be revealed for the first time during the second session of the

Aerosol Division on May 18.

A panel on the role of public relations in promotion and marketing is a highlight of the second session of the Automotive Division, the afternoon of May 18. Also discussed will be hazardous substances labeling laws.

Specialties in the Sixties

By **Howard M. Packard**

president

S. C. Johnson & Son, Inc.

"WITH competition increasing daily throughout this rapidly expanding industry, chemical specialties manufacturers are recognizing they cannot always rely on extrinsic trimmings to interest consumers in their products.

"Minor improvements probably will not be enough in this and future decades. The industry knows the consuming public requires more than a different container, a different color or a different smell.

"At S. C. Johnson & Son, Inc., we believe only basic product advances are the key to continued success.

"Closely connected with product technological advances, we believe, is the future development of real utility in packaging which truly helps the consumer.

"The amazing growth of the aerosol and pressure package industry in the last 15 years points up the fact that ease and convenience to the customer—through packaging—is a factor of primary importance which must be developed more fully in the 1960's.

"Without the availability of aerosol packaging some of the excellent specialties products of today would not even have been possible.

"We at Johnson's have an excellent example of this in our own experience. Surveys and studies conducted for us revealed that approximately 50 per cent of all homemakers in America were rarely waxing their furniture, although they

always were faced with the task of dusting. We felt that if a product could make possible the accomplishment of these two tasks at the same time, we could take advantage of a practically un-tapped market.

"Our answer was 'Pledge,' a totally new concept in home care which gives waxed beauty instantly, as you dust. 'Pledge' provides the homemaker with real utility; it combines two household jobs and makes them almost fun; it makes the housewife want to say, 'At last, I'm getting somewhere.'

"This is packaging with a purpose.

"At Johnson's Wax, however, we are not considering even a single new product that offers only clever packaging as a point of uniqueness. Historically, our goal has been to provide better ways of caring for the home and the automobile. This same thinking has been extended to our commercial building maintenance products line and also applies to our industrial metal-working and agricultural coating products.

"If different packaging helps us achieve our goal, as it did with 'Pledge,' then we strive for maximum utilization of this factor.

"Part of our 75-year-old philosophy to strive for demonstrable product superiority is based on a tenet that strong advertising and merchandising, no matter how skillful, are no substitute for imagination and ingenuity in new product development."

The Insecticide Division program for its two sessions calls for discussion of topics ranging from "Pesticide Formulations" to "Developments in the Administration of Public Law 86-139."

Annual sales of polishes, finishes and cleaners for 1959 were to have been reported on during the meeting of the Waxes and Floor Finishes Division, May 16.

All six divisions of CSMA are electing executive boards during the midyear meeting. New boards take office following the annual meeting in December. In addition, a nominating committee will be appointed to prepare a slate of officers and members of the Board of Governors of CSMA. They will be elected at the annual meeting in December.

The motion picture program, set for the afternoon of May 16, calls for a showing of the film, "A Letter to Moscow", by Armstrong Cork Co., Lancaster, Pa. Other films are expected to be shown during this session.

J. Kenneth Kirk, who will discuss the Food Additives Amendment to the Federal Food, Drug, and Cosmetic Act, during the CSMA meeting, was appointed to the new position of Assistant to the Commissioner for Regulations Making, 11 months ago. Prior to this he had been head of the Boston district of Food and Drug Administration. He has been with FDA since 1930, serving in various assignments until his appointment in 1940 to the staff of the commissioner in Washington, D. C. Mr. Kirk handled enforcement recommendations until his Boston appointment in 1957. In 1955 he received the National Civil Service League Merit Citation for "outstanding public service." In 1956 he received the Superior Service Award from the Department of Health, Education, and Welfare.



Toxicants for Body Lice Control

By M. M. Cole, P. H. Clark, and Carroll N. Smith,

Entomology Research Division, Agricultural Research Service
U. S. Department of Agriculture, Orlando, Fla.

THE human body louse (*Pediculus humanus humanus* L.), an important pest of man in many parts of the world, is the vector of epidemic typhus and relapsing fever. Although this species is not of major importance in the United States at the present time, it is still of vital concern to us. We are interested not only in the problems of general world health, but especially in the welfare of our military personnel stationed in other countries. In 1942, under the impetus of World War II, intensive studies were begun at USDA's Agricultural Research Service Laboratory in Orlando, Fla., to find more effective means of control.

Interest in the problem was stimulated anew by the development of resistance to DDT, first reported in Korea by Hurlbut *et al.* (1952), and more recently by the occurrence of resistance to lindane in Japan and Africa (Barnett and Knoblock 1952, Nicoli and Sautet 1955, Wright and Brown 1957, Smith 1957). This paper will summarize the developments in this program and current methods of control.

Although this paper will be concerned in detail only with the work at Orlando, a number of other laboratories have conducted important parts of the program. The Beltsville, Md., laboratory of the Entomology Research Division has synthesized several thousand new chemicals for evaluation as insecticides and synergists. Several universities have also contributed compounds for testing, and numerous commercial companies have

generously made large numbers of their experimental materials available at early stages of development. King (1954) gave the results with 11,000 compounds screened against lice during the 10-year period 1942-52, and thousands of additional compounds have now been examined.

An important consideration in the evaluation of a louse toxicant is its toxicity to humans. Before tests with the promising compounds can be made on human subjects, sufficient pharmacological data are necessary to assure their safety for such restricted experimental use. Such clearance was provided during the early years by the Food and Drug Administration, and more recently by the Army Environmental Health Laboratory. More extensive pharmacological and toxicological data are required before new materials of proved effectiveness can be put into general use. Although background infor-

mation on toxicity may be available, special studies are usually necessary to provide clearance for use in louse powders. The Army Environmental Health Laboratory has conducted some of these toxicological studies, while others as in a very recent instance have been carried out by the U. S. Public Health Service (Hayes *et al.* 1960).

Rearing Methods

From 1942 to 1945 the laboratory colonies were given two blood meals a day on human subjects (Culpepper 1944). In 1945 the lice were converted to feeding on domestic rabbits (Figs. 1 and 2) (Culpepper 1948); rabbits are still used, but the lice are fed only once a day (Smith and Eddy 1954). They are allowed to feed 20-30 minutes on the clipped bellies of the rabbits. Rabbits are purchased from commercial growers and about half of those tried actually prove to be favorable hosts. A rab-

Figure 1. Feeding body lice on rabbit





Figure 2. Fully engorged adult lice on cloth and point of lead pencil.

bit is used every day for about a month and then rested about a month.

Lice are kept on cloth patches about 2 inches square in glass evaporating dishes 120 mm. in diameter (Fig. 3). Wool cloth was used for many years but recently black cotton corduroy has been substituted. Dishes of lice are kept in incubators at a temperature of about 86° F. and 60% relative humidity. About 1,000 to 2,000 lice on 20 patches are placed in each dish. During egg laying, adults are changed to fresh cloth patches every two days and the eggs remain attached to the old patches. Each collection of eggs is kept in a separate dish for hatching. The range in age of the lice varies with the hatching time. Most of the eggs hatch in seven to 12 days, causing a spread of four to five days in the age of the lice. If a more uniform age were desired, it would be necessary to remove newly hatched lice at different intervals.

Several colonies are maintained. Some are resistant to specific insecticides, such as DDT and lindane; others are subject to selection with the various insecticides in attempts to develop or reduce resistance (Eddy *et al.* 1955; Cole *et al.* 1957). To preclude mixing of colonies separate facilities, such as rabbit hosts, cages, stanchions,

tables, and incubators, are used for each colony.

Testing Methods

Beaker Tests:—Beaker tests are used for screening new compounds as toxicants or synergists, as well as for more critical comparisons between compounds and for determining levels of insecticide resistance. Young adult lice are confined on treated circular patches of woolen cloth in glass beakers, as illustrated in Figure 4. The patches are 1½ inches in diameter and exactly fit the bottom of standard 50 ml. beakers. They are saturated with a solution of the insecticide in acetone or other sol-

vent by momentary immersion or by pipetting, and then impaled on pins to dry. After drying 15 to 20 minutes each treated cloth is placed in a beaker and 10 or 20 freshly fed lice of mixed sexes are added. The beakers are held at about 80° F. and 70% relative humidity; mortality records are taken after 24 hours. Lice are examined and classified according to the effect of the insecticide. Normal lice show no effect, those slightly affected can crawl but not with complete coordination, knocked-down lice cannot crawl, and dead lice show no movement of either legs or gut. Since experience has shown that lice that are knocked down after 24 hours will eventually die, they are included with the dead in computing percent mortality. Although the effect of some insecticides is slightly slower on females than on males, there is no significant difference in mortality. Third-instar nymphs show a greater tolerance than other stages. In residual tests the patches are tested after various intervals of aging.

Patch Tests:—The materials most effective in beaker tests are further evaluated as pyrophyllite powders in patch tests, as illustrated in Figure 5. One half gram of powder is applied evenly from a salt shaker on a patch of ribbed knitted cotton cloth, 4.9 inches square (1/6 square foot). Each

Figure 3. Evaporating dish with lice on cloth patches. Incubator in background.



treated patch is thumbtacked to a plywood panel, six inches square, with a piece of clean paper inserted between the cloth and the panel. Twenty lice are confined on the cloth for 24 hours inside a wide-mouth jar ring which is held in place by rubber bands. Effectiveness is then determined as in beaker tests.

Sleeve Tests:—Materials that have shown promise in patch tests and been cleared for limited experimental use on human subjects are evaluated still further in sleeve tests, as illustrated in Figure 6. A sleeve of ribbed knitted cotton cloth, one square foot in area, is treated with three grams of pyrophyllite powder containing the test material. The powder is sprinkled evenly over the inner surface of the sleeve from a salt shaker and rubbed into the cloth by hand. The upper and lower ends of the sleeve are fastened with elastic adhesive tape to the arm or leg of a subject. After three days, and at semiweekly intervals thereafter, 25 adult lice are placed in each sleeve, and the mortality is recorded after 24 hours. In recent years, since this is the final test, lice are used from the DDT-resistant Korean A colony. The sleeves are worn continuously as long as the treatments cause at least 75 per cent mortality.

Synergist Tests:—Tests to evaluate synergists for pyrethrins, allethrin, DDT, or other insecti-

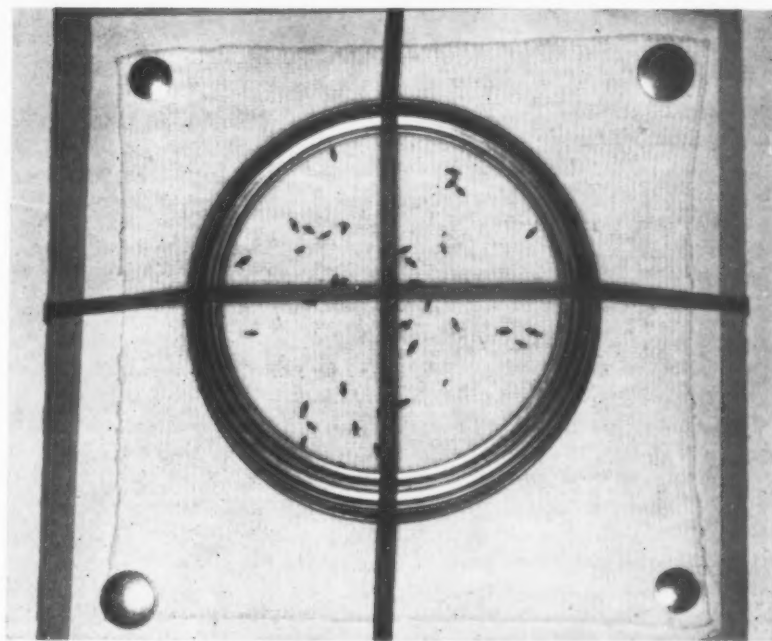


Figure 5. Testing chemicals against body lice on cloth patches.

cides are conducted in a manner similar to the procedures outlined above. To test residual effectiveness, beaker tests are conducted with acetone solutions containing 0.005 per cent of pyrethrins plus 0.05 per cent of synergists. If effective at these concentrations, the mixtures of toxicants and synergists are tested at several dilutions to determine minimum lethal concentrations. If a synergist is about equal to the standard, sulfoxide, patch tests will be made with a powder containing 0.1 per cent of

allethrin plus one per cent of the synergist. If equal to sulfoxide, a powder containing 0.2 per cent of allethrin and two per cent of the synergist will be tested by the sleeve technique.

Louse Control Chemicals

DDT:—DDT is the most satisfactory material for controlling lice that have not developed resis-

Figure 6. Testing chemicals against body lice on sleeves.

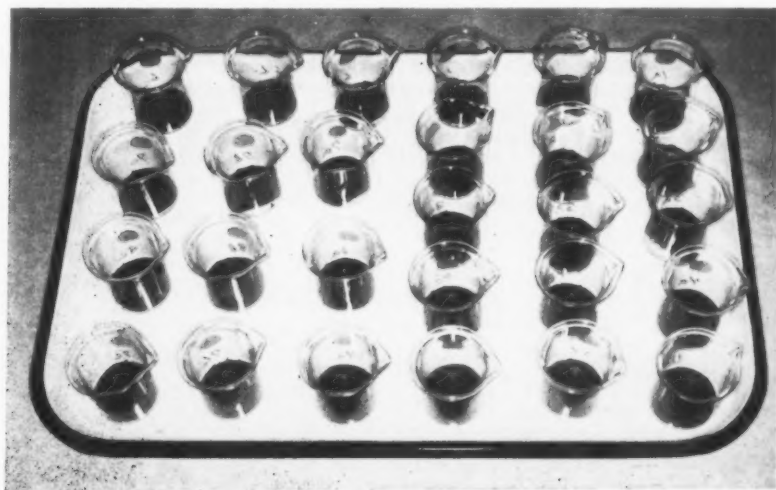


Figure 4. Testing chemicals against body lice in beakers.



tance to this insecticide. It is most often used in a powder, at a concentration of 10 per cent in pyrophyllite or talc (Bushland *et al.* 1944a, 1945), which is easy to apply and has a long residual action. It is not ovicidal, but a single application remains effective long enough to eradicate an infestation, since eggs usually hatch in less than 2 weeks. The powder should be spread evenly over the inner surface of the underwear and other clothing, with special attention to folds and seams. The socks should also be treated.

DDT powder has been used with great success in the mass treatment of troops and civilian populations to control lice and typhus. Hand-operated dusters or powered air compressors operating multiple dust guns have been used. Treatments can be applied quickly because the clothing need not be removed. About 1½ ounces of powder per person are blown into the openings of the clothing at the neck, sleeves, and waistline. The hair, head covering, extra clothing, and bedding should also be treated.

Lindane:— Powder containing one per cent lindane (Eddy 1952) has been used successfully to control DDT-resistant lice in Korea and elsewhere. It is applied in the same way as DDT, but the period of residual effectiveness is much shorter, and a second application within 7 to 10 days is recommended. The requirement for repeated treatments renders lindane unsatisfactory for mass delousing of migrant populations, or other groups that cannot be reached with the necessary frequency. Resistance to lindane is less widespread than resistance to DDT, but it may become an increasingly important problem.

Pyrethrum and allethrin:— Powders containing synergized pyrethrum or allethrin will also control lice. One formulation that has been in practical use contains 0.2 per cent pyrethrins, two per cent sulfoxide as a synergist, two per cent 2,4-dinitroanisole as an ovicide, 0.1 per cent isopropyl cresols

(Phenol S) as an antioxidant, and three per cent diatomaceous earth as a conditioner. Other formulations that have been applied successfully contain *N*-isobutylundecylamide or piperonyl butoxide as the synergist (Bushland *et al.* 1944b). Several hundred other synergists have been examined, most of them synthesized at the Beltsville laboratory, and a number of them have shown promise in laboratory tests (Carson and Eddy 1949, Eddy *et al.* 1954). A powder containing 0.3 per cent allethrin instead of pyrethrins and three per cent sulfoxide has been equally effective in laboratory tests on human subjects. These powders cause rapid knockdown, but have a shorter residual life than desirable, and treatments should be repeated each week until the infestation is eradicated.

Derris, sabadilla, and stavesacre:—Derris, sabadilla, and stavesacre (*Delphinium staphisagria*) have at times been recommended or proposed for use in louse control, but all were found inferior to pyrethrum and allethrin in laboratory investigations.

Malathion:— Malathion shows the most promise as a replacement for DDT in the control of resistant lice. Its effectiveness in pyrophyllite powders was first demonstrated by Cole and Burden (1956), who found a one percent powder to be effective against eggs and a 0.1 per cent powder to give 100 per cent kill of adults for 14 days in patch tests. They also demonstrated that DDT-resistant lice were as susceptible to malathion as nonresistant lice. A pyrophyllite powder containing one per cent malathion gave 100 per cent kill of adult DDT-resistant lice from the Korean A colony for 17 days in sleeve tests (Cole *et al.* 1958).

Studies on the development of resistance to malathion are now under way. A strain started from the regular laboratory colony of nonresistant lice failed to show resistance to malathion after 44 generations of selection under heavy pressure. The concentration was

first maintained at approximately the LD-50 level, but as no resistance developed, it was progressively increased until all were finally killed, with no indication of an increase in resistance following selection at any level. Another colony has been started from the lindane, DDT-, and dieldrin-resistant Free-town colony from Africa. Selection with malathion at about the LD-50 level has not developed any resistance in four generations.

One of the greatest advantages of malathion in addition to its biological effectiveness is its low cost. At one per cent it would be cheaper than pyrethrum or allethrin, and about the same as DDT, at the concentrations used.

The human subjects used in the sleeve tests showed no appreciable decrease in cholinesterase level and no noticeable ill effects. However, since one ounce of louse powder is an average treatment for the entire clothing under practical conditions, the three grams per sleeve used in the tests was only about one-ninth the normal dosage. Toxicological studies by Hayes *et al.* (1960) indicate that malathion, at least at one per cent, may be used safely as directed for DDT. At this concentration the duration of its residual action and its ovicidal effectiveness should be adequate to eradicate an infestation with a single application. It is recommended for use in areas of the world where DDT has become ineffective because of resistance, and where a single treatment method is required in louse and typhus control programs.

References

- Barnett, H. C., and E. C. Knoblock. 1952. Chemical and biological studies on DDT resistance of lice. *U. S. Armed Forces Med. Jour.* 3: 297-304.
- Bushland, R. C., L. C. McAlister, Jr., G. W. Eddy, and H. A. Jones. 1944a. DDT for the control of human lice. *Jour. Econ. Ent.* 37(1): 126-7.
- Bushland, R. C., L. C. McAlister, Jr., G. W. Eddy, H. A. Jones, and E. F. Knipling. 1944b. Development of a powder treatment for the control of lice attacking man. *Jour. Parasitol.* 30(6): 377-87.
- Bushland, R. C., L. C. McAlister, Jr.,
- (Turn to Page 160)

The wide range of physical properties now available in Eastman's Epolene series of low-molecular-weight polyethylene resins provides formulating flexibility never before possible. For with the addition of three new resins (Epolene LVE, HDE and HD), polish makers can choose now from among seven different types to improve existing formulations or to develop new products.

Epolene resins produce self-polishing floor polishes that exhibit high gloss, anti-slip, water-spotting resistance and rebufferability. Emulsions of up to 40% solids can be prepared. Properly formulated, polishes made from Epolene are low in color and do not darken or turn yellow. Neither do they build up color with repeated applications.

Choose from either emulsifiable or non-emulsifiable types to obtain the right formulating characteristics and performance properties for your equipment and service.

Epolene E emulsifiable • Epolene E produces water-emulsion floor polishes that exhibit an excellent balance of high gloss, hardness, durability and good resistance to water-spotting, scuff and dirt pick-up. Ideally suited for heavy traffic, polishes made from Epolene E exhibit extreme toughness due to its higher molecular weight.

Epolene LVE emulsifiable • Lower in melt viscosity than the other emulsifiable Epolene resins, Epolene LVE has somewhat better handling characteristics and is the easiest to emulsify. It is softer than other resins in the series, too, and therefore may be expected to contribute better anti-slip properties and rebufferability to floor polishes made from it.

Epolene HDE emulsifiable • The first high-density emulsifiable polyethylene available, Epolene HDE is much harder than other resins in the series, yet quite easy to handle. A film of unmodified Epolene HDE emulsion is almost as hard as a film from a finished floor-wax formulation (rebufferable type). This increased hardness is due not only to the nature of this high-density polyethylene, but also to the fact that it is more compatible with oleic acid than are other emulsifiable polyethylenes. Epolene HDE restores rebufferability to polymer-containing polish formulations without sacrificing hardness.

Epolene N non-emulsifiable • Epolene N can improve significantly the properties of paraffin, microcrystalline or other waxes and is easily blended with these materials. It can replace part or all of the hard waxes in solvent paste polishes, for example, automotive polishes. Such polishes are characterized by low color, excellent hardness and gloss, and remarkable durability.

Epolene LV non-emulsifiable • Epolene LV and Epolene N are useful in similar applications. The LV type is softer than Epolene N, however, and because of its lower melt viscosity is somewhat easier to handle.

Epolene HD non-emulsifiable • An extremely hard material, Epolene HD is nevertheless easy to handle because of its low melt viscosity. It has a high softening point, and may be blended with waxes to increase their melting points. Epolene HD has a higher density than the other non-emulsifiable polyethylenes in the series.

Epolene C non-emulsifiable • Higher in molecular weight (7000) but lowest in density (0.907) of all the Epolene resins, Epolene C may be used in modifying waxes to increase melting points or to improve toughness and gloss.

Eastman now offers polish formulators 7 basic types of polyethylene

New Epolene resins
enable you to formulate
broader range of
liquid and paste polishes

Type	Molecular Weight	Brookfield Viscosity (cps. @ 120°C.)	Density	Penetration Hardness (100g./5sec./77°F., 10ths of mm.)
Epolene E	2500	1500	0.938	2
Epolene HDE	1500	455	0.956	1
Epolene LVE	1500	400	0.939	5
Epolene N	2500	2500	0.928	1
Epolene HD	1500	340	0.938	0.5
Epolene LV	1500	360	0.925	3
Epolene C	7000	16,000	0.907	7

If you are using low-molecular-weight polyethylenes in your polishes, investigate the complete Epolene series. Your Eastman representative will gladly explain the advantages of each of the resins in the series and will show you how to realize the most profitable use of them in your formulations. Ask him for specific formulating assistance and about the new time-saving, cost-cutting emulsifying technique developed at our laboratories.

Epolene®

EASTMAN low-molecular-weight polyethylene resins

SALES OFFICES: Eastman Chemical Products, Inc., Kingsport, Tennessee; Atlanta; Chicago; Cincinnati; Cleveland; Detroit; Framingham, Mass.; Greensboro, N. C.; Houston; New York City; Philadelphia; St. Louis.
West Coast: Wilson Meyer Co., San Francisco; Los Angeles; Portland; Salt Lake City; Seattle.

Quality

INSECTICIDES AND REPELLENTS FOR THE MANUFACTURER

of Pressurized Aerosol Insecticides

"Pyrocide" Aerosol Mixes—Complete Mixes—Our tested recommended formulas, or formulas tailor-made to your specifications. You add propellant. Filtered and chill-tested. Special formulas to meet military and government specifications.

Partial Mixes—Require a minimum of processing. Contain pyrethrins, allethrin and synergists.

"Pyrocide" 175 RC—Contains 20% pyrethrins, stabilized—guaranteed less than 0.25% propellant insolubles—dewaxed. *Makes non-staining aerosols.*

MGK Allethrin—Purest form of allethrin commercially available. Standardized at 90%, 20% and 2.5% allethrin content. Fast knockdown. High kill.

of Fly and Roach Sprays

"Pyrocide" Booster Concentrates—For quality Grade AA sprays. Combinations of pyrethrins, allethrin, or both, with synergists. There are Booster Concentrates for specific purposes, such as industrial sprays, cattle sprays and mechanical aerosols.

"Pyrocide" 20—For odorless household sprays and non-poisonous sprays for food processing plants. Contains 2 grams pyrethrins per 100 cc. The original standardized pyrethrum extract.

Intermediates—Highly concentrated mixtures of toxicants and synergists to reduce your costs.

Repellents

MGK Cow-Tent Repellents—Effective against horn flies, face flies, horse flies, stable flies, house flies, gnats, and mosquitoes. Approved by USDA for use on dairy and beef cattle. Safe, non-poisonous.

MGK Personal Repellents—Safe, effective protection against biting flies, mosquitoes, and gnats. Suitable for use in either pressurized sprays or liquid sprays.

Synergists

MGK 264 and Piperonyl Butoxide—The Dual Synergist system is ideal for use with pyrethrum in either liquid or pressurized spray products. Greatly improves roach kill against resistant and non-resistant roaches. Also effective with Allethrin. Reduces costs—increases profits.

Agriculture

Dry "Pyrocide"—A dry concentrate for use in making non-poisonous dusts effective against many pests attacking food crops. Contains 2.2% pyrethrins. Highly recommended for late application on vegetables. No poisonous residue.

"Pyrocide" Emulsion Concentrate (Ever Green)—For repacking as garden spray. Leaves no poisonous residue.

M **LAUGHLIN**
G **ORMLEY**
K **ING**

Company

Quality

PRODUCTS SINCE 1902

1715 S. E. Fifth Street • Minneapolis, Minnesota

for
floor
waxes
that
really
stand
up...



WATEREZ & SYNTHEMUL

1582 WATEREZ alkali soluble resin

■ In floor wax, the use of Reichhold's 1582 WATEREZ, an alkali soluble resin, allows a much broader range of floor finish raw materials than previously possible. A formula with up to 25-30% of 1582 WATEREZ insures outstanding gloss and levelling without embrittlement or powdering. Another advantage of this resin is its rapid solubility at temperatures as low as 85-100° F., with excellent stability of the resulting cuts.

9431 SYNTHEMUL acrylic emulsion

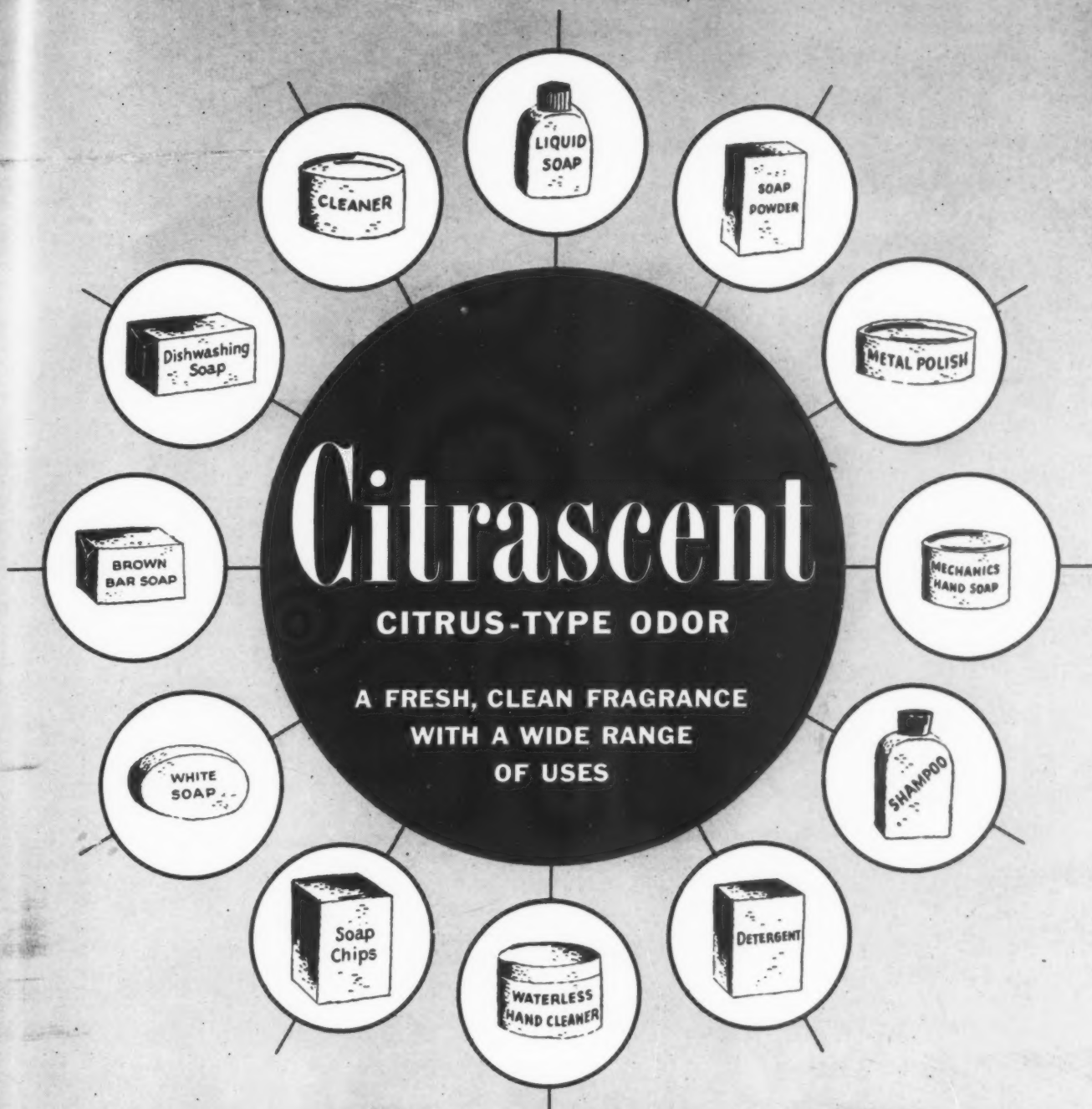
■ With this Reichhold acrylic emulsion (previously designated ACRIPOLE), floor finishes can be formulated that have excellent gloss, color, toughness and spreadability. The compatibility characteristics of 9431 SYNTHEMUL are unsurpassed. Combination with a broad range of resins and waxes is possible. For data on formulating floor wax with WATEREZ and SYNTHEMUL, write to Reichhold's Emulsion Division.

Synthetic Resins • Chemical Colors • Industrial Adhesives • Phenol
Hydrochloric Acid • Formaldehyde • Phthalic Anhydride
Maleic Anhydride • Ortho-Phenylphenol • Sodium Sulfite
Pentaerythritol • Pentachlorophenol • Sodium Pentachlorophenate
Sulfuric Acid • Methanol

Creative Chemistry . . . Your Partner in Progress



REICHHOLD
REICHHOLD CHEMICALS, INC., RCI BUILDING, WHITE PLAINS, N. Y.



**ITS LOW PRICE ASSURES YOU OF
TOP ODOR VALUE AT MINIMUM COST**

This fine reodorant saves you money and gives your products a popular, distinctive fragrance that has definite *sales appeal!*

CITRASCENT has a truly lasting fragrance—with more “lift”... it is uniform and stable in odor value and provides complete freedom from discoloration in soaps.

Notice how amazingly little it costs to reodorize your products with CITRASCENT.

PRODUCT	RECOMMENDED QUANTITY	YOUR COST
Liquid Soaps Liquid Detergents Insecticide Sprays Shampoos	¼ oz. to 1 gallon	3¼¢ gallon
Cake Soap Powdered Soap Powdered Detergents Waterless Hand Cleaners General Purpose Cleaners	4 oz. to 100 lbs.	¼¢ pound

Order a trial quantity today!



AROMATIC PRODUCTS, Incorporated • 235 FOURTH AVENUE • NEW YORK, 3

CHICAGO • DALLAS • MEMPHIS • PITTSBURGH • LOS ANGELES • BOSTON • FORT LAUDERDALE



FOOD PROCESSING EQUIPMENT

RESTAURANTS AND BARS

DRINKING WATER OF POULTRY

**CHICKEN AND DAIRY
FARM SANITATION**

OIL FIELDS

NEO-GERM-I-TOL

A 50% concentrate of a specially and carefully selected blend of higher alkyl dimethyl benzyl ammonium chlorides.

With very high hard water resistance and bactericidal potency.

A most potent and economical germicide on the basis of "unit cost per use dilution." Most desirable for hard water areas.

NEO-GERM-I-TOL is one of the many biocidal agents of Fine Organics, manufacturers of the largest variety of quaternary ammonium compounds.

Technical data sheet, sample and prices on request
Cable address: Molchem Telephone: GRegory 2-6800

FINE ORGANICS, INC.

LODI, NEW JERSEY

*For the
most
effective
aerosol
insecticide
use
Prentiss
new process*



PYRETHRUM

PURIFIED • LOW COLOR • NON-STAINING

Our new Pyrethrum and Pyronyl Concentrates in your aerosol will give the most deadly weapon available in the fight against industrial and household pests.

Full potency Pyrethrum concentrates having no ugly green or yellow precipitates are completely soluble in kerosene — no filtration during manufacture needed. They are compatible in all carriers and completely stable.

Technical information and samples upon request.



Prentiss Drug & Chemical Co., Inc.

101 WEST 31st STREET, NEW YORK 1, N. Y. • 9 SOUTH CLINTON STREET, CHICAGO 6, ILL.

Atlanta • Detroit • San Francisco • Los Angeles • Toronto • Montreal • Fort Worth • Pittsburgh • Philadelphia



Get Higher Quality End-Products at Lower Cost - with HOECHST WAXES!

(Because Hoechst waxes are so highly compatible with polymer dispersions and low-cost waxes, you get a greater combination of the finest wax properties.)

WAX	Melting Point °C °F		Acid Value	Saponifi- cation Value	Unsaponi- fiable matter	Color
ACID WAXES						
S	80- 83	176-182	140-155	160-180	7-10%	light yellowish
L	80- 83	176-182	125-145	150-170	7-10%	dark yellow
LP	81- 84	178-183	100-120	130-150	7-10%	yellowish
ESTER WAXES						
E	78- 82	172-180	15- 20	145-165	7-10%	light yellowish
CR	82- 85	180-185	30- 35	110-125	12-16%	brown-black
KPS	80- 83	176-182	20- 30	135-150	12-14%	yellowish
KSS	78- 83	172-182	25- 35	120-135	21-24%	yellowish
BJ Unbleached	70- 73	158-163	17- 25	135-150	22-25%	light yellowish
BJ Bleached	70- 73	158-163	65- 85	155-170	21-23%	light yellowish
F	74- 77	165-170	6- 10	95-105	42-47%	light yellowish
KP	80- 83	176-182	20- 30	135-150	12-14%	brown
OP	102-106	215-223	10- 15	105-120	7-10%	beige
O	102-106	215-223	10- 15	105-120	7-10%	beige
OM	93- 98	199-209	17- 22	105-120	7-10%	beige
FL	95-100	203-212	30- 37	90-105	18-23%	light brown
SPECIAL	96-100	205-212	13- 18	90-105	20-22%	brown-black
OTHER WAXES						
H	81- 82	178-180	2- 9	170-185	5-10%	whitish
W	57- 60	134-140	0- 1	5- 25	85-90%	whitish,, transparent
V	48- 50	118-122	0-	0	100	off-white

EMULSIFIERS

Emulsifier 2106—a nonionic, white wax emulsifier in solid form.

Prompt deliveries from local warehouses. Samples and literature on request.

HOSTAWAX COMPANY

A Division of HOSTACHEM Corporation

350 Fifth Avenue, New York 1, N. Y.

Telephone: Longacre 4-3530

In Canada: Davies Irwin Ltd., 121 Bates Road, Outremont, Montreal 8, Quebec

Some basic principles of

Marketing Chemical Specialties

By **T. Carter Parkinson***

McCormick & Co.
Baltimore, Md.

By definition, Webster states that market is the course of commercial activity by which the exchange of commodities is effected. In reality and in practical application as most successful companies see it today, marketing encompasses the following specific areas: market research, sales, advertising, sales promotion, and that all important area of budgeting. Many major companies have also incorporated the broad area of trade relations within the framework of the marketing division and it is the responsibility of the trade relations man to visit with the trade and check as to the effectiveness of all the other areas mentioned above. He is, in a sense, a roving ambassador; well equipped to explain the general company policies, and a constant listening post to determine how effectively the marketing program is getting through. He should report back to the marketing staff any areas that require further analysis or refinements to make the overall program more effective.

As we in our company operate basically within the framework of the grocery industry, this is the area in which I will dwell. I hasten to explain further that we are a company that markets not a single product but a rather complex and complete line of products. Before we analyze the grocery industry I think it is only fair to make one broad assumption—that Mr. and Mrs. Consumer today assume and expect a *quality*

product. Any manufacturer who is not aware of this or who still attempts to market an inferior product is certainly not long for a successful business operation. And now for general analysis:

Is this a static market? I think a quick look at the changes that have occurred over the past ten years will tell that this is a constantly changing market which requires very close analyses on a continuing basis on the part of any company.

Traditionally, financial analysts have been aware of the steady strength of the food and grocery manufacturing industry in resisting recessions. In recent years they have had reason to become aware that in producing today's wonderful new basket of groceries the industry has also become a growth industry. A short 15 years ago, for example, a good-sized, well-stocked grocery store offered about 3,500 items; today the number is closer to 8,000. Total consumer expenditures for food during the same period have grown from \$31 billion to an expected \$73 billion this year, and the sales of grocery and combination stores—the classification which is made up largely of today's modern and efficient super markets—have soared from less than \$14 billion to an anticipated \$46 billion for 1959.

Rising population and rising income have, of course, contributed to this growth, but the industry's sales have increased beyond anything which could have been forecast on the basis of just the increase in population and in-



come. It used to be that the percentage of disposable income spent for food declined when national income rose. But that old rule has been broken in the last 15 to 20 years. Contrasted with 21 per cent in 1944, the American people in 1959 are spending an average of 22 per cent of their much larger disposable income for food. For this they receive an annual basket of groceries which is greatly improved in terms of quantity, quality, variety, packaging and convenience. Compared with pre-war 1939, 20 years ago when the public also spent about the same percentage of income for food as it does now, the improvement is even sharper. The effect of this has been that while per-family income has more than tripled over the last 20 years, the percentage of disposable income which America spends for food is still about 22 per cent—almost the same as in 1939.

Maintaining this constant share of the consumer dollar has been a severe challenge to the resourcefulness and imagination of

*Paper presented at 46th annual meeting, Chemical Specialties Manufacturers Association, Washington, D. C., Dec. 9, 1959.

food manufacturers, particularly in view of the unrelenting efforts of other industries to increase their respective shares. The makers of stylish and powerful automobiles, new, better and more efficient household furnishings and appliances, entertainment, sports, tempting and pleasurable equipment to enhance the enjoyment of increased leisure time—all have skillfully appealed to the consumer for a larger share of his disposable income.

Why Industry Growth?

Why has the grocery industry grown? It has been stimulated by research which yielded new products, improved old products, new uses, convenience and ready-to-serve foods, built-in kitchen service, great variety and large numbers of available products; and by more and better advertising and promotions, more effective merchandising, consumers' greater understanding and appreciation of the value of good eating, better trade relations, and, of course, the modernization of plants and improved over-all management operations.

About 7,000 specially trained scientists and technicians, skilled in every phase of their work, are employed by food manufacturers. Convinced that tomorrow's products are the direct result of today's research, they are investing more than \$100 million annually to improve their present products and to seek out new items which will add to the enjoyment of eating. Almost two-thirds of the items in today's grocery basket are new or have been basically improved since 1946. In the past twenty years there has been a striking expansion in the consumption of the processed convenience foods with their many consumer dividends notably time-saving and menu variety. The gains in the per capita consumption of these foods have been truly phenomenal. The ease and speed of preparation of the many convenience products means a saving of the homemaker's time and work in

the kitchen of about four hours a day. Formerly, it required about 5½ hours a day to prepare the three meals for a family of four. Now it can be done in about 1½ hours. Is the consumer paying for all these added conveniences? No—in many instances they cost her less than the same dish prepared at home from the raw ingredients. Let's take a look at one specific example of the sales stimulating effect of convenience. In 1939 we consumed about 5 billion pounds of oranges. Stimulated by the development of canned and frozen orange juice, consumption has now climbed to 12 billion pounds.

How do these statistics apply to the chemical specialties business? They apply, very definitely, to all who are selling or aspire to sell their products through this tremendous grocery industry. This is the retail outlet the consumer visits most frequently—as a matter of fact, more often

than any other place where retail merchandise is offered for sale. This is the "climate" in which anyone selling or aspiring to sell a product must live.

Product Potential

We have product "X"—carefully studied to be sure it is a quality item, in the right size container, and attractively packaged. You know you can mass produce this product. You know your purchasing and manufacturing costs. Do you, at this point, just send out a group of salesmen to see what sort of a track record you can accomplish? If so, I'm afraid you are going to be increasing the number of business failures listed each year. This is the time and the place for one of the most critical studies.

What is the potential for your product in total and, more important, what is your potential by store size? Let's recall now the

Table 1.

I—Number of Stores

A. Total retail food stores	373,000
B. Specialty stores (meat and fish, bakeries, fruit markets, candy stores)	88,000
C. Total grocery and combination	285,000
1. Chains (4 or more stores)	22,100
2. Independents	262,900

II—Super Markets

A. Definition — A store doing \$500,000 and over annual volume	
B. Number of super markets — total 20,413	
1. Chains	14,834
2. Independents	5,579
	TOTAL 20,413
C. Changes in per cent of grocery volume done by super markets over past 20 years	
1. 1938	16%
2. 1948	31%
3. 1958	64%

III—Volume

A. Total food store and grocery sales	\$53,075,000,000
B. Specialty stores	4,800,000,000
C. Grocery and combination	48,275,000,000
1. Chains	45%
2. Independents	55%

IV—Number of Stores Required For 70% Total Food Store Sales

1939	112,000 stores
1948	90,200 "
1954	50,325 "
1958	44,501 "

Table 2. Sales of household pesticides through grocery stores*
(expressed in thousands)

Year	Aerosols	Liquids	Pastes and Solids	Total
1958	\$30,390	\$20,190	\$9,350	\$59,930
1957	26,430	19,390	8,990	54,810
1956	22,500	19,800	8,600	50,900
1955	23,940	20,440	7,720	52,100
1954	22,120	—	—	35,750
1953	19,640	—	—	32,160
1952	10,650	—	—	23,220
1951	9,370	—	—	21,650
1950	7,850	—	—	20,100
1949	5,930	—	—	17,470

*Source: Food Publications Inc., "What The Public Spends For Grocery Store Products."

number of stores representing 70 per cent of the grocery business. (Table 1.) You will have to analyze and determine your potential by store size before you can determine your distribution decisions. In other words, if you were able to develop a program which would secure say 60 per cent distribution, what would be your ultimate volume with this distribution? Would this then justify your investment in plant, machinery, and overhead to produce for you a profitable operation?

Distribution

However, let's assume your market research people have compiled all available information, studied the situation and decided this will be a profitable operation if you can secure the distribution. Your next big question is how to approach this distribution problem. An adequate, well-trained sales force today is an extremely expensive operation. You must realize that the average reputable company sending its representatives to call on the grocery industry must offer these salesmen a competitive wage and all the fringe benefits we hear so much about, i.e., a retirement program, a profit-sharing program, hospitalization coverage, automobile costs and travel expenses as they refer to hotel and meal costs. These costs today are as high as \$5.00 to \$6.00 per call. This is before the man has sold 5 cents worth of merchandise so you have to apply re-

alistic cost factors to this distribution problem. With these added to your other costs, you must then decide whether you can effectively distribute this product and still make a profit. One caution in this area, possibly the most misunderstood factor in the grocery industry today, there is a further refinement known as *effective* distribution. You can no longer take the total number of stores and decide that you want to sell 50 per cent, 60 per cent or 70 per cent of them because in any given market 20 per cent of the stores do 80 per cent of the business. Unfortunately, in some markets an even smaller percentage of stores represent an even larger percentage of total available volume. Therefore, you must have a program to secure *effective* distribution in those stores that represent maximum potential. This is, obviously, being consistent when you are faced with the high fixed costs of sales today. You must send qualified men to exert pressure in those stores that will give you maximum return against these costs.

Merchandizing

Let's assume we have cleared all the hurdles thus far and are ready for the next step before we actually market this product. How is this item to be merchandised? Does it belong on the established shelf or gondola equipment in the grocery store? Does it require special equipment for merchandising, such as the cigarette, potato chip

or spice rack? What is the ideal location in the store? Should it be displayed with a companion or related item? Will it sell best at eye level? Obviously, we would all say yes to this latter question, but there are certain known limitations. If you are merchandising a large or bulky item the grocery industry has traditionally displayed these on the bottom shelf.

Is the size of your package right for this particular product and this particular field? Do you have an oversize package? I can assure you the grocery industry is always making studies in this area. You might selfishly think by having a large package you would get more consumer attention, but if you have developed too large a package it is not even going to be exposed to the consumer. You must also plan carefully the size of your shipping container and how you pack the item. Don't pack a product four dozen to the shipping case if normal shelf space holds one dozen. These might seem like petty things we are all inclined to take for granted, but I can assure you each of these areas is almost as important as the product itself. If your sales organization is going to have proper reception at the retail level, don't be guilty of throwing road blocks or getting them into hassles. These are just a few of the basic things the grocery industry expects the manufacturer to have studied and carefully thought out.

What is the next major area for consideration. Does your product lend itself to dislocated, or seasonal displays? Is the product an impulse item where sales can be materially increased through the use of attractive related, dislocated, or plus displays? Does your product have a heavy seasonal influence that you might develop a theme around to ask for a seasonal feature? This, again, requires careful study and the development — if the product profit structure will stand it—of attractive point-of-sale material.

(Turn to Page 159)



REFINED (DEWAXED) BLEACHED
White Shellac

Preferred by Non-rubbing Floor Polish brand name manufacturers

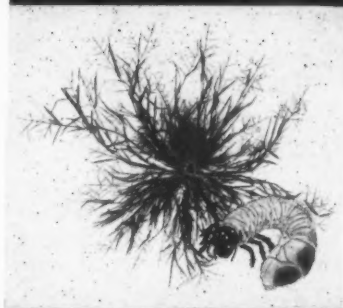
Because of Uniform Quality — Quick and Complete
Dissolving and Superior Leveling Properties — Long Shelf Life.

Plus High Gloss — Abrasion Resistance —
Maximum Anti-Slip Characteristics

STANDARDIZE WITH **WHITE SHELLAC**

PIL-GRUBB-STAT CO., INC.
Manufacturers of White Shellac and Floor Polishes
100 West 42nd Street, New York 18, N.Y. Tel. MU 2-7400
Branches: Chicago, St. Louis, Philadelphia, Baltimore, Washington, D.C.,
San Francisco, Los Angeles, San Diego, Portland, Seattle, Tacoma, Vancouver, B.C.,
London, England, and other foreign cities.

This is the year to cash in with **CHLORDANE** INSECTICIDE *key chemical* in the big outdoor living boom!*



TWICE THE POTENTIAL! CONTROLS CRABGRASS AND INSECTS!

Chlordane is the only pesticide that not only controls crabgrass but also kills lawn and garden insects. You'll start selling Chlordane in quantity with the first signs of spring. You'll keep selling case after case right through the summer and into fall lawn renovation time. Your sales potential is more than double that of any other pesticide chemical!

TWICE THE PROMOTION! NEWSPAPER AND MAGAZINE SCHEDULES DOUBLED!

Only Chlordane offers so much direct dealer sales support! This year, local newspaper advertising will be doubled! Chlordane ads in the top 90 market areas will bring your best potential customers into your store! National magazine advertising will be doubled, too! Your customers will be pre-sold by larger ads and longer schedules in *Better Homes & Gardens*, *Flower & Garden*, *Flower Grower*, *Popular Gardening*, *Practical Gardener*, *Horticulture*, *National Gardener*, and *Sunset*.



GET SET TO SELL CHLORDANE NOW WITH FREE "OFF-THE-SHELF" DEALER SALES PROGRAM!

If you carry garden supplies, chances are you have one or more brands of Chlordane in stock now. There's nothing to buy. All we want to do is help you sell what you already have on your shelves. To turn inventory into profits and speed turn-over, be sure to participate in the FREE Chlordane "Off-The-Shelf" program. You will get FREE promotional folders, point of purchase displays, product display ideas, and educational aids for your sales clerks. In addition, you will be eligible for both of the two Chlordane special incentive programs. One offers free gifts, the other cash awards. Send for complete information today!

***only
CHLORDANE
gives you**

- 1. CRABGRASS CONTROL SALES!**
- 2. INSECT CONTROL SALES!**
- 3. DIRECT DEALER SALES SUPPORT IN DEPTH!**

Plan for profits! Fill out and mail this coupon today! SCS-50



VELSICOL CHEMICAL CORPORATION
330 East Grand Avenue, Chicago 11, Ill.
Exclusive basic manufacturer of technical CHLORDANE.

VELSICOL INTERNATIONAL CORP., C.A.
P. O. Box 1687, NASSAU, BAHAMAS, B.W.I.

Please send me your Chlordane Dealer Kit for more 1960 sales!

☐ Dealer ☐ Distributor ☐ Formulator

Name _____

Firm _____

Address _____

City _____ Zone _____ State _____



Morton . . . symbol of leadership in polymer floor polish development

MORTON LATEX RESEARCH . . . A comprehensive continuing research program in the laboratories of Morton Chemical Company brings you the best in Latex developments. Our understanding of polish formulating problems is your assurance of the latest techniques and developments in polymer polish ingredients.

TECHNICAL SERVICE FOR MANUFACTURERS . . . Analyzing your polymer floor polish and recommending improvements is one of Morton's most important projects. Our technical staff is on call, and on duty . . . in your laboratory or ours . . . until your problem is solved.

OUTSTANDING PERFORMANCE . . . Your goal . . . and ours . . . is to produce a polymer floor polish with the characteristics your customers want. *Morton's RWL Latexes* permit you to formulate for high gloss, hardness, durability, leveling, or any other specific properties needed. Ultra-small particle size of less than 0.02 microns, and high stability of *Morton's RWL Latexes* give you complete flexibility in developing your formulas.

Your Morton Man can give you complete details on *RWL Latexes* and Morton's complete technical service. Your inquiry will receive immediate attention.

CHEMICAL PRODUCTS FROM MORTON

Modified Polystyrene and Acrylic Latexes
Magnesium Oxide • Magnesium Carbonate
Bromides—Potassium, Sodium, Ammonium
Sodium Sulfate (salt cake) • Hydrochloric Acid
Allyl isothiocyanate • Benzotriazole
Photographic Chemicals
Diazo Chemicals • Cuprous iodide
3, 5-Diiodosalicylic Acid • Orthophenylene diamine
Phloroglucinol • Agricultural Chemicals



MORTON CHEMICAL COMPANY

110 N. Wacker Drive, Chicago 6, Illinois
Plants: Ringwood, Illinois—Manistee, Michigan
Weeks Island, Louisiana

COMPARED with other forms of protection, products liability insurance may be considered somewhat of a newcomer. Its growth during the last few decades has been tremendous. Its continued growth seems assured especially when we consider the great number of new products in every industrial field, the public's awareness of the possibility of successfully suing a manufacturer or others and that universal problem called taxes.

Products liability insurance is available to manufacturers, formulators, distributors, whole-

erty including loss of use thereof is also covered. Products liability insurance does not cover accidents suffered by employees, while acting as such nor does it cover property owned, used by or in the care, custody or control of the insured.

Most insurance companies restrict their coverage to accidents occurring within the United States and Canada but this limitation may be removed in many cases providing the claim or suit is brought within the U. S.

Is products liability insurance necessary? The answer to this is an emphatic "Yes". When a

Products Liability Insurance

By Norman H. Warren,
Campo & Roberts
Long Island City, N. Y.

salers, retailers and other outlets. Our major studies have been concerned with manufacturers and formulators of specialty chemicals, particularly in the field of pesticides. Other specialty chemical compounds such as soaps, detergents, waxes, essential oils, aerosol products and many others may be considered in the same light. Manufacturers and sellers of containers, regardless of the materials used, are also faced with the problem of products liability.

What is Covered?

Products liability insurance is designed to protect the policyholders against claims and suits which are based on accidents caused by goods or products manufactured, sold, handled or distributed by the policyholders.

The accident must occur after the insured has relinquished possession of such goods or products and must occur away from the insured's premises.

The coverage applies to bodily injury, sickness or disease, including death at any time resulting therefrom. Damage to prop-

erty including loss of use thereof is also covered. Products liability insurance does not cover accidents suffered by employees, while acting as such nor does it cover property owned, used by or in the care, custody or control of the insured. Most insurance companies restrict their coverage to accidents occurring within the United States and Canada but this limitation may be removed in many cases providing the claim or suit is brought within the U. S. Is products liability insurance necessary? The answer to this is an emphatic "Yes". When a manufacturer sells his product he no longer has control over it. He does not know how it is going to be stored, shipped, handled or used. He does not know how prudent or capable the ultimate consumer will be. Because a manufacturer makes a diligent effort to market only products that are safe when properly used there is no assurance that he will not be faced with a claim or suit for damages should his product be directly or remotely connected with an accident. True, many such cases are groundless, false or fraudulent but the manufacturer must defend the case which not only takes time but is expensive regardless of how the case is decided.

Pesticides and other chemical specialties are usually marketed in several states if not country-wide. This creates a terrific problem of investigation and adjustment of claims, especially if there is evidence of faulty manufacture, formulation or packaging. A qualified insurance company is in a position to investigate and settle claims whereas generally manufacturers or formulators do not



COVER YOURSELF WITH CARE

SOAPS

- OIL BOUQUET C. NO. 613
- OIL JASMIN NO. 613
- OIL WILD ROSE NO. 55
- OIL MIMOSA NO. 615
- IMITATION GERANIUM S

AEROSOL BOUQUETS

- OIL GARDENIA NO. 3125
- APPLE BLOSSOM NO. 3122
- MINT BOUQUET NO. 3123
- OIL BOUQUET NO. 3121
- OIL WISTARIA NO. 3124

SHAMPOO ODORS

- OIL BOUQUET ALMOND NO. 8262
- OIL CORYLOPSIS NO. 55
- OIL BOUQUET M. NO. 55
- OIL BOUQUET APPLE BLOSSOM NO. 8240
- OIL CLOVER NO. 888
- OIL BOUQUET H.O. NO. 8267
- OIL BOUQUET NARCISSUS NO. 55
- OIL BOUQUET WILD ROSE NO. 55
- OIL BOUQUET TV NO. 55



COVER ODORS FOR INDUSTRIAL USES

- FOR: ADHESIVES, DISINFECTANTS, INKS—PRINTING AND LITHOGRAPHING, INSECTICIDES, LACQUERS, PAINTS, PETROLEUM BY-PRODUCTS, SPRAYS, VARNISHES AND WAXES.
- COVER ODOR N-2(PE)
- COVER ODOR C NO. 1954(A)
- EUGENOL TECHNICAL(I)
- COVER ODOR P. NO. 1954(S)
- COVER ODOR P.D. NO. 250(P)
- COVER ODOR N-43(I)
- COVER ODOR G.R. NO. 27(PE)
- COVER ODOR NO. 350(IN)
- COVER ODOR W.P. NO. 400(W)
- COVER ODOR J.W. NO. 2404(W)
- RUBBER DEODORANT NO. 56
- COVER ODOR SASS. NO. 1954(A)
- COVER ODOR ST. NO. 275(P)

Florasynth

LABORATORIES, INC.

Write on your company letterhead for our descriptive cover odor monograph.

EXECUTIVE OFFICES: 900 VAN NEST AVE. (Box 12), NEW YORK 62, N. Y. • CHICAGO 6 • LOS ANGELES 21
BOSTON • CINCINNATI • DETROIT • DALLAS • NEW ORLEANS • ST. LOUIS • SAN FRANCISCO
Florasynth Labs. • (Canada Ltd.)—Montreal • Toronto • Vancouver • Winnipeg—Agts. & Dist. in Mexico: Dragueria & Farmacia Mex. S.A., Mexico 1, D.F.

A-Adhesives,
D-Disinfectants,
I-Inks,
IN-Insecticides,
P-Paints,
PE-Petroleum,
S-Sprays,
V-Varnishes,
W-Waxes

Products Liability Insurance

(From Page 119)

have the personnel or the "know how" to handle such cases with dispatch and equity.

It was not too long ago that a well known manufacturer marketed a new hair wave preparation. The manufacturer had to request retailers and distributors throughout the country to remove the preparation from their shelves following reports that it irritated the eyes. The adjustment of any claims resulting from this episode emphasizes the need for carrying insurance with a company having widespread facilities.

Many large retail outlets will not offer to the public products that are manufactured or formulated by firms that do not carry products liability insurance. This does not mean that the retailer wants to be named in the policy but there is an implied stamp of approval if the manufacturer or formulator is able to obtain products liability insurance.

Limits of Liability

The customary limits of liability for bodily injuries are expressed in amounts applicable to one person, one accident and in the aggregate for the policy term. Property damage limits are expressed in amounts applicable to one accident and in the aggregate during the policy term.

All damages arising out of one lot of goods or products prepared or acquired by the insured shall be considered as arising out of one accident or occurrence.

The above observations apply to policies issued by most American companies and also by foreign insurers. However, while the coverage and limits may apparently satisfy the insured's needs it might be well to examine some of the terms and conditions more closely.

Perhaps the most controver-

sial phrase in the products liability policy is the expression "caused by accident". The word "accident" has been defined briefly as a "sudden and unforeseeable event". The important word in this definition is "sudden". This is of particular significance to manufacturers and formulators of chemical specialties. A few examples may clarify this reasoning.

1. A farmer sprayed his cotton field with an insecticide containing arsenic. The insecticide drifted to a neighboring pasture killing cattle grazing there. There was no suddenness attending the casualty.
2. Over a period of time a woman developed an allergy arising from the continued use of a plastic shower cap. It can hardly be said there was any suddenness.
3. A child died as a result of lack of proper heating in a tenement. The court held that there was no liability on the part of the insurance company as the policy was written on a "caused by accident" basis. This decision in no way affected the liability of the owner of the premises. His responsibility remained. He simply did not have insurance protection.
4. Fish and other marine life have been killed because an industrial plant disposed of waste materials containing toxic chemicals. This practice, followed over a period of time, was a deliberate act on the part of the plant operators. For two reasons it would be difficult to bring this situation within the meaning of the term "accident". First, because the proximate cause of the casualty was an intentional act on the part of the industry. Second, the damages

resulted over a period of time and the element of suddenness was non-existent.

It will be contended that the liability for such cases should be borne by the farmer or applicer. This may be true in theory but in practice we are all aware that it is a common procedure for attorneys in tort cases to implead everyone directly or remotely connected with a casualty. Furthermore jurors are not noted for their sympathetic treatment of successful manufacturers.

Hundreds of other cases could be mentioned but they would merely amplify the restrictive nature of the term "accident". The simplest method of avoiding these shortcomings is to substitute the term "occurrence" for that of "accident".

An occurrence has been defined as an "event" or "anything that happens". There is no definite or implied restriction as to length of exposure the connotation of suddenness being absent. Further, there is no requirement that the proximate cause be unintentional. A policeman patrolling a pipe line for an oil company deliberately shot and killed a man tapping the line. It might be argued that there was an accident so far as the pipe line tapper was concerned but the attorneys for the insurance underwriters were prepared to deny coverage until they were informed that the term "occurrence" had been used.

Some insurance companies settle bodily injury cases that clearly do not fall within the meaning of the term "accident". In such cases the companies should not object to the use of the term "occurrence".

The insurance companies, as a rule, do not treat property damage cases with the same liberality. In fact many companies are loath to write property damage insurance on an occurrence basis.

When one set of limits is applicable to bodily injuries and another set to property damage it is up to the assured to determine



Brittle Extract of Cube...

safe sprays for Roses, Rover or Romaine!

General purpose garden sprays and pet sprays based on Penick Brittle Extract of Cube sell better for two excellent reasons:

1. This well-known insecticidal material is outstandingly effective against a wide variety of aphids, caterpillars, fleas, beetles and other chewing and sucking insects.

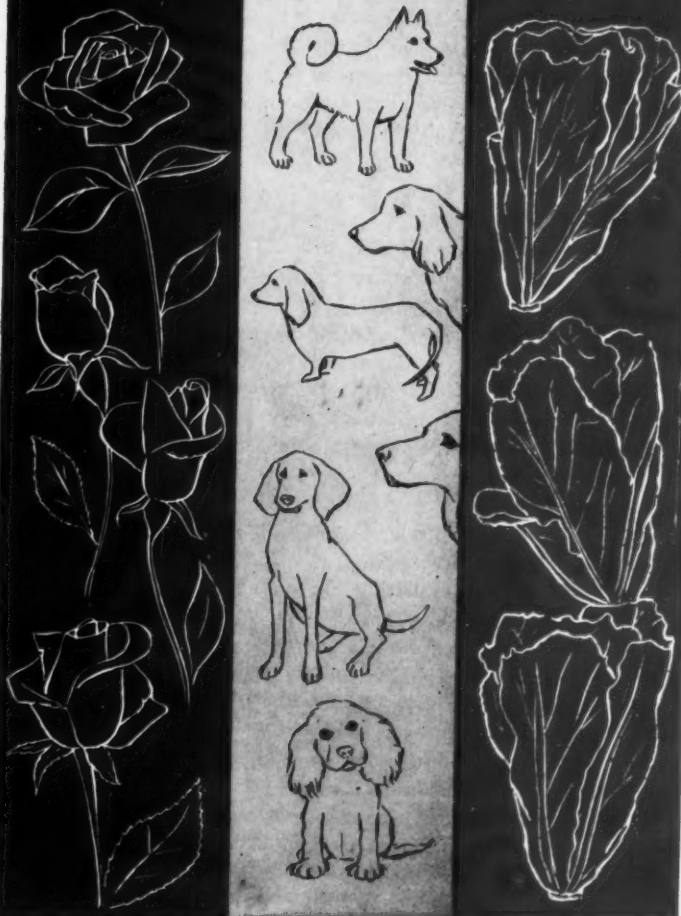
2. Brittle Extract is safe to use...has low toxicity and won't build up harmful residues.

Penick's experienced processing and control of raw materials, right back to natural sources, assures you of consistent extracts, retaining a maximum of active components. Our Brittle Extract of Cube contains 25-40% rotenone, plus other active rotenoids, granulated for easy formulation.

We will be glad to send samples, recommended uses, suggested formulations and other technical data on request.

PENICK

Farm Chemical and Insecticide Division
S. B. PENICK & COMPANY
100 Church St., New York 8 • 735 W. Division St., Chicago 10



Products Liability Insurance

(From Page 121)

under which category his greatest exposure lies and have his insurance arranged accordingly. This is most unsatisfactory as no one can determine, even approximately, whether bodily injuries or property damage will be the principal cause of large claims or suits. High limits for bodily injuries are most desirable but no less desirable are high limits for property damage. A rug cleaner was most effective in cleaning expensive orientals. So effective was it that it ate the rugs as well as cleaning them. Specialty chemicals through a chain of circumstances have caused fires and explosions with little or no personal injuries. One point to bear in mind is that people most often can remove themselves from the path of danger whereas physical property is fixed and generally immovable. In addition, people often experience pain or discomfort when using an unsuitable product and stop using it. Property, on the other hand, may be treated with an unsuitable compound over a period of time resulting in irreparable damage.

Instead of having separate limits for bodily injuries and property damage, it is recommended that a high combined limit be obtained. Then the loss, no matter where it falls, whether singly or in combination, will be subject to the high single limit.

Products liability insurance should be considered catastrophe coverage. High limits are necessary in order to be reasonably well protected. In addition, it is recommended that a deductible of \$500, \$1,000 or \$5,000 per accident or occurrence be included in the policy. The average firm can stand a loss of these amounts but would find it difficult to raise \$300,000 or a million dollars for the payment of products liability losses. The inclusion of the deductible

has the effect of materially reducing the cost of the insurance and also enables the policyholder to settle small individual cases with a view to maintaining good public relations.

Premium

The premium for products liability insurance is computed at a rate per thousand dollars of sales of the policyholder. The rate is determined by the limits carried, the type of products manufactured or formulated, the loss experience of the policyholder and other information developed by a questionnaire.

Selection of Company

While many companies are reluctant to write products liability coverage for chemical and pesticide firms there are a few who do entertain this class of business. Most companies require that other forms of coverage such as compensation, plant liability, boiler and machinery, etc., be placed with them. Occasionally a company will write only products liability providing they are assured of a substantial volume of business and a fair chance of making a profit over a period of years.

Of course, the company should be financially sound. It should be licensed to do business in most if not all of the states. It should be flexible in its general attitude toward the broker or agent negotiating the insurance as well as the policyholder. It should not be bound by restrictions, rules and regulations set down by some officer or committee who may never have had to face this type of problem.

The company should pay all legitimate claims promptly but should resist unworthy claims. It should keep the broker or agent informed of the progress of ad-

justment of claims and suggest steps to be taken to avoid, if possible, a recurrence of similar cases.

Taxes

The premium paid for products liability insurance is a deductible operating expense. An uninsured products liability loss is also allowed in tax returns. This would apply to that portion of the loss falling within the deductible or to the entire loss if no insurance were carried. Experience has shown that chemical specialties manufacturers may suffer no losses for a number of years and suddenly be faced with a very serious claim or a multiplicity of small claims. There are few classes of insurance where the claims experience is as erratic as that inherent in the products liability field.

It is obvious that the purchase of products liability insurance will tend to produce more consistent financial results for the manufacturer or formulator than if no insurance were carried.

Perhaps no other form of insurance requires the high degree of rapport between the policyholder and the insurance company. They must at all times fully cooperate and act in harmony to the end that untoward occurrences are reduced to a minimum thereby enabling the insurance company to reduce rates and at the same time enjoy a reasonable profit.★★

Armour Brochure

Armour Industrial Chemical Co., 110 North Wacker Drive, Chicago 6, has just issued a 14-page illustrated brochure on "Armolads" fatty amine derivatives and their application as furnace oil additives in a variety of crude stocks. "Armolads" inhibit sludge formation and have some dispersant and anti-corrosion activity, according to the manufacturer. For best results the formulation of two parts of "Armolad" with one part of "Arquad" is suggested. "Arquads" are dialkyl dimethyl ammonium chlorides with cationic surface activity.

The MOST EFFECTIVE Insect Repellent!

DIETHYLTOLUAMIDE

Cowles
DETAMIDE® 95

Cowles DETAMIDE 95 is superior in color,
odor characteristics, and stability. No unpleasant
odor . . . water white . . . and stays that way.

We guarantee a minimum 95% meta-isomer
content — the isomer that has the **most repellency!**

Cowles has the capacity to supply your needs
immediately and steadily. Write for technical data and
prices on your letterhead.

Sold in 5-gallon or 55-gallon drums.



1885 — 75th Anniversary — 1960



CHEMICAL COMPANY

Cleveland 3, Ohio



Schenectady Resins



for emulsion polishes

SR-433

low cost, alkali-soluble resin for ammonia-cut dispersions. Extremely light color. Contributes leveling, gloss, hardness, durability and water-spot resistance to polishes.

SP-500

high melt, terpene-phenol resin compatible with waxes and emulsifiable polymers. Adds gloss, clarity, toughness, water resistance and stability to polishes.

SP-561

low-cost, low-melt (140 F) fusion of SP-560 and oleic acid. For steam-jacketed kettles. Same performance as SP-560.

Have you evaluated these resins in your dry-bright or buffable emulsion polishes? Write for complete data on resin properties, polish formulation and performance.

*Resins and Varnishes for Industry
— Since 1906*

SCHENECTADY VARNISH COMPANY, INC.

SCHENECTADY 1, N. Y.

Disinfectants for Bedding

By Milton J. Foter, Ph. D.*†

Robert A. Taft Sanitary Engineering Center
U. S. Public Health Service
Cincinnati

A 1954 survey by Lloyd and Foter (22) of state regulations pertaining to sterilization of feathers and down indicates that most of the methods described employ dry heat, hot water, flowing steam or steam pressure. A number of workers have indicated that current commercial processing will sterilize new feathers, but data are not available to support the claim.

In 1955, a process was marketed for the treatment of feathers from used pillows which involved exposure of the soiled feathers to ultraviolet light and ozone. An evaluation of field and laboratory data showed that an exposure of the contaminated feathers to U-V light for four minutes and to ozone for two minutes (six min. cycle) resulted in about 90 per cent reduction in the microbial content.

*Paper presented during 46th annual meeting, Chemical Specialties Manufacturers Assn., Washington, D. C., Dec. 8, 1959.

†The contents of this paper are derived from the available literature and the opinions of the author, and should not be construed to represent the views of the Public Health Service.

Part II

In the process, dust particles and feather fragments also were removed.

Although well-defined studies have not been reported on the application of the gaseous sterilants described above to feathers and down, bedding linens, clothing, and the like, it is anticipated that they would exhibit similar bactericidal efficiencies under recommended conditions of use.

Commercial Laundering

Early studies on commercial laundry practices indicate that some procedures were highly efficient in removing and destroying vegetative microorganisms. Later studies showed that although laundering processes were efficient in removing bacteria from bedding materials, they became recontaminated during the water extraction (centrifugation or spinning), while hanging in the laundry, or

on the sorting table.

A one-year study of the sanitary efficiency of processes used in 54 laundries by Arnold (1) covered high and low temperature processing of white and colored clothes, respectively; effects of soaps and ironing; contamination and cleaning of wooden laundry cylinders; and the relationship of the season to bacterial contamination of clothes. Effectiveness of the laundering practices was based on bacterial counts made of the wash and rinse waters and of washed test clothes from which five square inch samples were cut for testing. The high temperature washing process for washing white fabrics which employs water temperatures of 165° to 170°F for 15 to 25 minutes and a 0.01 per cent (100 p.p.m.) chlorine bleach was found to be effective in removing and destroying bacteria (Table 4). The low-temperature process for washing colored clothes with water temperatures of 90° to 100°F and no bleach was not as effective as the high-temperature

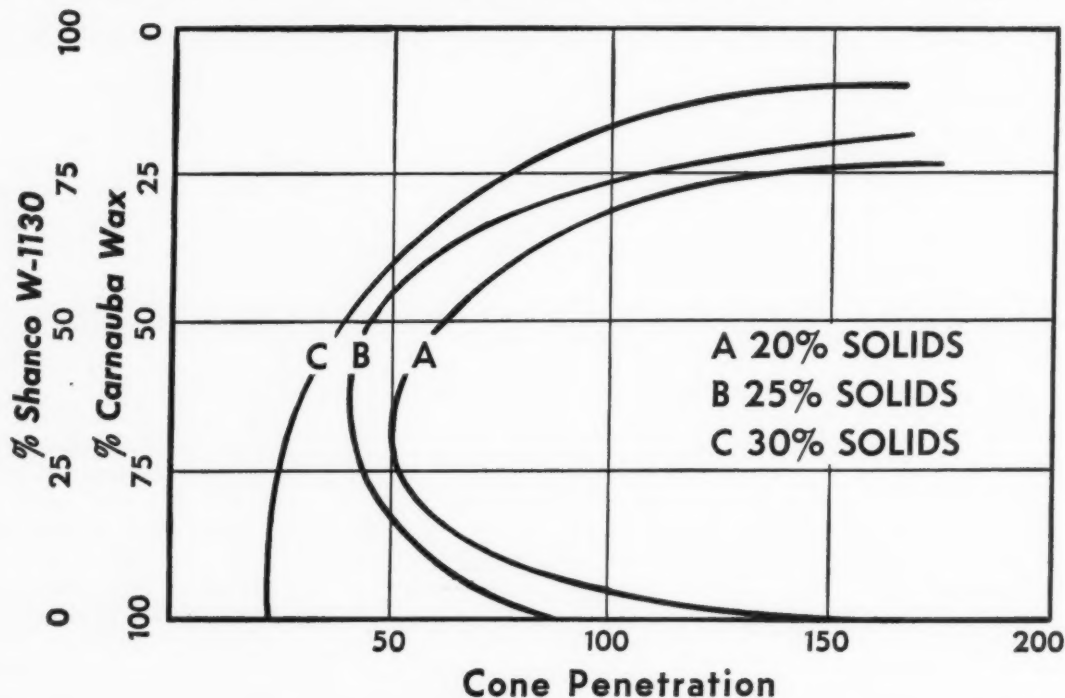
Table 4. High Temperature Washing Formula*
White Clothes

Operation	Purpose	Temperature Degrees Fahrenheit	Holding Time Minutes	Average Bacterial Count per c.c. Wash Water (1 Year — 120 Experiments)
Flush	Wets cloth (removes surface soil)	110	5	200,428
1 Sud	Detergent — (soap-alkali)	125	10	94,314
2 Sud	" " "	135	10	42,518
3 Sud	" " "	140	10	8,382
4 Sud	" " " plus 1% Bleach	165-170	15	5
1 Rinse	Removes detergent	165	3	1
2 Rinse	" " "	165	3	0.5
3 Rinse	" " "	165	3	0.4
4 Rinse	" " "	165	3	0.2
After Sour	Removes residue detergent	140)		
Blue		110)	10	Sterile

*Arnold, Lloyd, "A Sanitary Study of Commercial Laundry Practices," *American Journal of Public Health*, Vol. 28, No. 7, July 1938, page 840.

SHANCO W-1130 IN PASTE WAXES

You should know about the action of Shanco W-1130 wax in carnauba wax pastes.



(Carnauba vs. Carnauba + SHANCO W-1130)

Normally, we consider that carnauba wax is just about tops for hardness and firmness in pastes.

A look at the curve on the graph will reveal that 25% of Shanco W-1130 wax and 75% of Carnauba Wax in a 20% to 25% solids paste has a much harder cone penetration than when straight carnauba is used.

Conversely, a 20% solids paste made from 25 pounds of Shanco W-1130 and 75 pounds of carnauba wax will be harder than a 25% solids paste of straight carnauba and almost as hard as a 30% solids straight carnauba paste.

Consider also that Shanco W-1130 wax costs less than carnauba wax, and it is almost snow-white in color.

Repeat orders and the increasing volume are the best testimonial we can offer for W-1130.

Samples and complete information are yours for the asking.

SHANCO  **Plastics & Chemicals Inc.**
TWO MILE CREEK ROAD • TONAWANDA, NEW YORK

While attending the C.S.M.A.—ask about Shanco W-1130 and other Shanco products. Shanco headquarters will be at the Drake.

Table 5. Low Temperature Washing Formulae*
Light Colored Clothes,
Light Colored Clothes — Finished Service,
Dark Colored Clothes.

Operation	Purpose	Temperature Degrees Fahrenheit	Holding Time Minutes	Average Bacterial Count per cc. Wash Water (1 Year — 120 Experiments)
Flush	Wets cloth (removes surface soil)	90-100	5	3,675,055
1 Sud	Detergent — (soap-alkali)	100	10	1,979,862
2 Sud	" " "	100	10	1,248,758
3 Sud	" " "	100	10	255,579
4 Sud	" " "	100	10	221,293
1 Rinse	Removes detergent	100	3	88,966
2 Rinse	" " "	100	3	67,461
3 Rinse	" " "	100	3	43,809
4 Rinse	" " "	100	3	35,278
5 Rinse	" " "	100	3	24,441
After Sour	Removes residue detergent—brightens colors	95	5	158

*Arnold, Lloyd, "A Sanitary Study of Commercial Laundry Practices," *American Journal of Public Health*, Vol. 28, No. 7, July 1938, page 840.

bleach process (Table 5). The last stage in commercial laundering consists of the addition of "sour" or weak acid or acid salts to remove residual detergent and brighten the colors of clothes. When the "sour" lowered the pH of the water to 3.8 to 4.2 and this was held for five minutes, the bacterial counts of the rinse—"sour" water were further reduced.

Frequent cleaning of the cylinders was necessary to prevent bacterial "build-up" and recontamination of the clothes. During the warm months, the microbial content of clothes was considerably higher than during the cold months of the year. Numerous experiments were conducted on the bactericidal efficiency of the commercial ironing process. Twelve inch square (12 x 12 in.) pieces of fabric were contaminated by submerging them in broth cultures of *B. subtilis*, *B. megatherium*, *Cl. perfringens* (welchii), *E. coli*, *Ps. pyocyaneus*, species of staphylococci and streptococci. By the tests employed, all contaminated fabric samples were found to be sterile, which was attributed to the moist heat temperatures. The summary table (Table 6) shows the relationship between bacteria counts in the wash and rinse waters, following extraction and ironing and the bacterial content of the clothes based on 54 experiments.

In reviewing standard laundering procedures recommended by the American Institute of Laundering, Barnes (12) indicated that, although many of the steps involved aimed at other objectives, when properly controlled, they contributed to the destruction of pathogens in bedding and clothes. These steps were:

- Exposure of fabrics to water at temperatures of 160°F and above, exceeding the thermal death point of most pathogenic organisms.
- Exposure of white linens and clothes to chlorine in a concentration of 100 p.p.m. for 15 minutes or more, a lethal level for many pathogens.

- Sudden and extreme changes in pH from 10.0 or higher to 4.0 to 4.5 to which many vegetative cells are susceptible.
- Exposure to high dry-air temperatures in driers in excess of 160°F for 20 to 30 minutes.
- Exposure to high, moist, or dry heat during ironing where the temperature approximates 330°F at the point of contact, and where fabrics may be exposed transiently to high dry heat temperatures.

In a later study, Church and Loosli (4), over a three-year period conducted an extensive bacteriological study of washed and ironed bedding in one hospital and one commercial laundry. Table 7 shows the bacterial content of used and unused (freshly laundered) bedding obtained by several sampling methods. Table 8 shows the wide variety of organisms isolated from freshly laundered and used bedding and the frequency of their occurrence. The majority of organisms isolated were *Staph. albus* and *aureus* and alpha and nonhemolytic streptococci. Many of the strains of *Staph. aureus* were beta hemolytic and coagulase positive. The study showed that laundry procedures were generally efficient in removing bacteria during the washing and rinsing steps, as

Table 6. Relationship Between Distribution of Bacteria in Wash Waters and Fabrics*. Average of 54 Experiments. Fast Colored Clothes Low Temperature Washing Formula

	Total Bacterial Count per cc. of Wash Water	Total Bacterial Count per sq. in. of Cloth
Flush	3,201,950	3,776
First Suds	1,025,333	813
First Rinse	84,870	201
Last Rinse	16,263	84
After Sour Rinse	201	36
Extractor		
Immediately	345	33
3 Minutes	28	10
9 Minutes	19	4
After Ironing		0

*Arnold, Lloyd, "A Sanitary Study of Commercial Laundry Practices," *American Journal of Public Health*, Vol. 28, No. 7, July 1938, page 843.



(Discussing promising new insecticide compounds at Hercules' Agricultural Chemicals Laboratory are: George Buntin, discoverer of toxaphene; Dr. E. N. Woodbury, laboratory super-

visor; Dr. Keith D. Ihde, research entomologist; Dr. Arthur D. Lohr, supervisor, Naval Stores research; and Dr. William R. Diveley, a discoverer of Delnav.)

Hercules Research:

KEY TO TOXAPHENE'S OUTSTANDING RECORD OF SERVICE

Toxaphene has had a remarkable history. In a fast-moving industry this versatile insecticide maintains its leadership after more than 12 years of service to agriculture. New uses are being found for toxaphene each year as it continues its dynamic growth.

Continuous research is carried on by Hercules Powder Company to find new chemicals for agriculture, and to find better ways to utilize the tools

now available. Many of the people doing this work were engaged in the original development of toxaphene. Besides laboratory research, Hercules has placed great emphasis upon field testing and large-scale demonstrations. From such applied research in cotton insect control, for example, has come information to help farmers get better yields while lowering their production costs.

TOXAPHENE

NX60-1

Agricultural Chemicals Division, Naval Stores Department
HERCULES POWDER COMPANY
INCORPORATED
Wilmington, Delaware



Table 7. The numbers of bacteria isolated from used and unused (freshly laundered) bedding employing the Folin-bubbler sampler, compared with the number isolated with the Waring blender.*

Textiles	Folin-Bubbler	Total Number of Bacteria/Ft. ²		Mean Ratio
		Waring Blender	Blendor Bubbler	
Unused				
Pillowcase	30	2,700	90	76
Topsheet	30	2,300	77	
Topsheet	20	1,300	65	
Cotton blanket	266	17,500	66	
Cotton blanket	317	26,500	84	
Wool blanket	3,100	224,000	72	
Wool blanket	4,200	326,000	78	
Used				
Topsheet	1,200	166,000	14	29
Topsheet	3,700	124,000	34	
Topsheet	8,300	130,000	16	
Cotton blanket	4,500	113,000	25	
Cotton blanket	5,400	188,000	35	
Wool blanket	9,400	383,500	41	
Wool blanket	31,300	1,860,000	40	
Used				
Pillowcase	63,000	156,000	3	4
Pillowcase	24,000	64,500	3	
Pillowcase	62,000	210,000	4	
Bottom sheet	32,400	90,200	3	
Bottom sheet	53,200	303,800	6	
Bottom sheet	41,000	150,000	4	

*Church, Brooks D. and Loosli, Clayton G., "The Role of the Laundry in the Recontamination of Washed Bedding," *Journal of Infectious Diseases*, July-August, 1953, Vol. 93, pages 65-74.

Arnold (1) had shown, but that the bedding became recontaminated during water extraction in spin drying, in drying in the laundry, and during sorting.

Germicidal Rinses

Germicidal rinses are recommended for treating bedding materials prior to and after laundering for several reasons. Sterilization of bedding materials by laundering cannot always be relied upon; recontamination is possible, as shown by Church and Loosli: (4) woollens, such as blankets, cannot be treated by regular laundering procedures; and bedding contaminated with pathogens requires disinfection before laundering. The bactericidal efficiency of several classes of germicides, as shown by laboratory and field tests, has been reported in the literature. Ravenholt and his associates (23) and Klarmann (24) have reported on the bactericidal efficiency of a formulation which contains as active ingredients o-phenyl phenol, p-tertiary amyl phenol, and potas-

slum ricinoleate. Latlief, *et al.*, (25) and Goldsmith and associates (26) have studied the bacteriostatic, germicidal, and sanitizing action of quaternary ammonium compounds on textiles and the absorption of available chlorine and quaternary by cotton and wool fabrics from germicidal solutions. Other agents which have been recommended include chlorophenols, chlorine, hy-

pochlorites, hydrogen peroxide, sodium perborate, and other antibacterial agents.

Blowers and Wallace (27) described a method for the washing and disinfection of contaminated blankets in hospital laundries. Following regular laundering, the blankets were immersed in a 0.036 per cent (360 p.p.m.) solution of cetyl trimethylamine bromide for 10 minutes, the solution was extracted by spin-drying, and the blankets were dried in warm air. By bacteriological test methods employed, the bacterial counts decreased significantly and the treated blankets contained a detectable residual of the germicide.

All of these workers reported that the use of germicidal rinses before laundering and in the rinse cycle materially reduced the bacterial content of bedding and clothing and minimized cross contamination.

Home Disinfection

Efficiency of home automatic washing machines: Ridenour and associates (10) conducted an extensive bacteriological study of household automatic clothes washers in self-service public laundries to determine the possible existence of public hazards. They found that a complete laundering operation in household machines removes from a low to 99.0 per cent of the bacteria in test clothes. The level

Table 8. Approximate per cent of species of bacteria isolated from hospital bedding (Waring blender sampling).*

	Used Bedding	Bedding Unused
Number of Ft ² Samples	124	126
Mean Total Organisms/Ft ²	473,290	5854
Microorganisms	Percent	Percent
<i>Streptococcus salivarius</i>	3	30
<i>Staph. albus</i>	2	30
<i>Staph. aureus</i>	1	10
<i>Streptococcus thermophilus</i>	1	20
<i>Neisseria catarrhalis</i>	3	0
<i>Escherichia coli</i>	10	0
<i>Sarcina lutea</i>	5	1
<i>Proteus vulgaris</i>	2	0
<i>Bacillus mycoides</i>	35	2
<i>Bacillus subtilis</i>	10	3
Others	12	4

*Church, Brooks D. and Loosli, Clayton G., "The Role of the Laundry in the Recontamination of Washed Bedding," *Journal of Infectious Diseases*, July-August, 1953, Vol. 93, pages 65-74.



Mantrose Shellacs
—your "key" to better
specialty products

Dozens of today's improved specialty products—like self-polishing waxes, inks, special finishes—rely on new Mantrose specialty shellacs as their key ingredient.

From the finest imported seed lac, Mantrose upgrades the product with the world's most advanced processing know-how and equipment—to safeguard shellac's unique properties.

But this is only the start! Then Mantrose chemists *modify* these shellacs—augment them with new, *controllable* characteristics "tailored" precisely to fit individual processing or product requirements.

Mantrose shellacs may well be the key to improving *your* products, too. Chemists and consultants from the Mantrose Laboratories will be glad to discuss your needs. There is no charge for this service.



The **Mantrose** *Corporation* Established 1919

IMPORTERS • BLEACHERS • MANUFACTURERS

99 Park Avenue, New York 16, N.Y. • Attleboro, Massachusetts • MU 7-2762

of removal of bacteria was dependent on the presence or absence of soil, type of organisms, amount of detergent, and type of washer. Approximately 96 per cent of the removal occurred in the wash cycle. *E. coli* was particularly susceptible to destruction by a pH of 10 or above and by room temperature drying. *Staph. aureus* was more resistant to these same factors. In studies on wash and rinse water temperature, practically all enteric organisms studied were destroyed at 145°F within three minutes, with water at a pH of 8.0 or above. A majority of the staphylococci were also killed under these test conditions. Where a 10-to-20 minute wash cycle is used, or water temperature is increased above 145°F, heat sanitation would be even more effective. In studies on the use of germicides in the final deep rinse of home machines, it was found that five to 10 p.p.m. of chlorine and 50 to 100 p.p.m. of certain quaternary ammonium compounds would effect a 99 per cent reduction in bacteria in addition to removal by the wash and rinse cycles. Cross contamination was found to occur in succeeding lots of clothes in the same washer. This could be avoided or minimized by the use of hot water above 145°F. or chemical sanitizers. Preliminary data indicated that sanitation by a dryer cannot be considered as a substitute for proper detergency or chemical sanitization in the wash or rinse cycles.

In studies (28) on the bactericidal properties of household synthetic detergents, it was found that in waters containing 0.14 per cent alyklbenzene sulfonate and inoculated with 40 million cells per ml. of *Staph. aureus* and tested at temperatures ranging from 100° to 140°F., sterility was essentially achieved at 120°F or higher. In laboratory studies on the bactericidal action of a household chlorine bleach, using an inoculum of one million cells per ml. of an antibiotic-resistant *Staph. aureus* culture, 20 p.p.m. of chlorine at 77°F. was found to effect a 100

per cent kill in 30 seconds. In home laundering operations, use of bleach was found to be about 200 p.p.m. of chlorine.

It appears that properly operated household washing machines effectively remove large numbers of bacteria from contaminated clothes. Water temperatures at or above 145°F and addition of effective germicides to rinse waters increase the antibacterial action of the laundering operation and minimize contamination of subsequent batches of clothes.

Information is not readily available in the literature on water temperatures provided for the home laundering operation. Unpublished data (28) indicate an average maximum water temperature of 125° to 130° F. as the water enters the washer, with an expected cool-down of 10° F. during the wash cycle. These observations apply to washing machines without self-contained water heaters. These washer temperatures reflect hot water temperatures in the area of 140° F. at the source of supply. It would thus appear that water at or above 140° F. is not available routinely for home laundering.

Germicidal Rinses

Decontamination of mattresses, pillows, blankets, bedding linen, and clothing in the home is not so well defined as in hospital and commercial laundries. Confronted with this problem, the homemaker is unprepared to cope with it. She is inexperienced and untrained in the fundamentals of disinfection, lacks appropriate guidelines to carry it out and must rely on such materials as can be purchased in the pharmacy and retail market. Boiling contaminated bedding and clothing before laundering might be suggested as a general rule. However, woolens and colored fabrics cannot be boiled without some damage, due to shrinkage and color runs. Initial boiling may cause permanent staining of fabrics from blood and albuminous materials which may be present. There is need for simple,

specific instructions for home decontamination of bedding and clothing.

Where bedding linen, blankets, and clothes are grossly contaminated with pus, fecal matter, and other body exudates, a germicidal rinse prior to home laundering is indicated. Factors, such as the water composition, temperature, type and concentration of soil, chemical structure of the active agent, and the like, influence the activity of germicides. The germicide also must be nonirritating, nonstaining, water soluble, readily available, easy to use, and inexpensive. A few readily available germicides are household chlorine bleach, hypochlorites, phenolic-type compounds, hydrogen peroxide, sodium perborate, formalin, and perhaps quaternary ammonium compounds. In view of the large number of germicides being formulated for sale at the retail level, others may have been omitted inadvertently.

The author has not studied these agents for the intended specific use. One must rely on the available information on germicides in arriving at what would constitute effective use of these agents as germicidal rinses for treating contaminated bedding in the home.

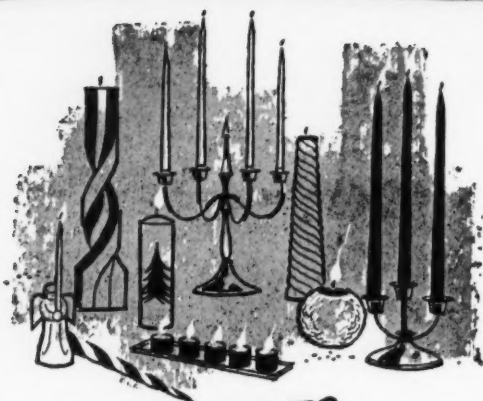
Following are suggestions for home use for some of these agents. It should be recognized that these are only proposals for further trial which may have to be modified according to actual conditions of use.

A. Liquid Chlorine Bleach and Hypochlorites

1. Should not be used on protein fibers, such as silk, wool, and mohair. (29)
2. Since most liquid bleaches contain about five per cent available chlorine, add two ounces to 10 gallons of water (approximately 80 p.p.m. available Cl_2 or 1:640 dilution). Use lukewarm water (75 to 95°F.).

(Turn to Page 139)

Progress with FATTY ACIDS



**MORE CANDLES
MADE TODAY
THAN 50 YEARS AGO!**

Stearic Acid is an important ingredient of candles. And, strange as it may seem, more candles are made today than 50 years ago. Stearic Acid imparts dripless, non-bending, and better burning characteristics to candles, keeps white candles from yellowing, helps colored candles keep their true shade.

**FATTY ACIDS
KEEP 'EM HONEST!**



What do Fatty Acids have to do with dice? Well — Oleic Acid is an ingredient in compounds for polishing dice. The dice must be perfect cubes and... to keep them that way... they are buffed and polished in a sawdust tumbling compound containing Oleic Acid.

Below are facts you should know about two Fatty Acids produced by A. Gross. Why not write us for samples and additional information on these and other Fatty Acids we produce. Send for the latest edition of the brochure "Fatty Acids in Modern Industry". Address Dept. S-1.

	DISTILLED STEARIC ACID GROCO 54 Double Pressed	DISTILLED RED OIL GROCO 4
Titre	53.9° — 54.5°C.	4° — 6°C.
Titre	129.0° — 129.9°F.	39.2° — 42.8°F.
Color 1" Lovibond Red*	0.5 max.	1 max.
Color 1" Lovibond Yellow*	2.0 max.	10 max.
Unsaponifiable	1.5% max.	1.5% max.
Saponification Value	209 — 212	198 — 203
Acid Value	208 — 211	197 — 202
% F.F.A. as Oleic Acid		99 min.
Iodine Value (WIJS)	4.5 — 6.5	94 max.
Refractive Index 50°C. (Av.)		1.4500

*5¼" cell for Groco 54

**THE SNOW
ON THIS TREE
WON'T MELT...**

... because it's artificial. It comes from an aerosol can and the bulk of it is Stearic Acid. Here is one of thousands of products that depend on Stearic Acid. Others range from hard mint candies to lubricating greases.



295 MADISON AVENUE • NEW YORK 17, N. Y.
Factory: Newark, N. J. • Manufacturers Since 1837



WAX FACTS

NEWS OF INTEREST TO WAX USERS —
DEVELOPMENTS IN THE FIELD OF SYNTHETICS

New - Exclusive - From the Duroxon People:

Special Issue — S-5-60

EMULSION TEST PANELS THAT REALLY TELL THE STORY

Now you can directly read and test the qualities of your polymer-, resin- or wax-polish quickly and accurately:

- Flow-Out, Leveling, Clarity of Gloss
- Film Color and Resistance to Film Discoloration
- Drying Time, Water-Spot Resistance, Recoatability
- Film Continuity, Hardness, Residual Tackiness
- Buffability, Resistance to Scratching, Powdering, Heelmarking

These panels are different from ordinary "test sheets." They show your polish both on dark and white surfaces. The coatings used for the testing surfaces are products of five years of research and were developed to guarantee maximum accuracy.

The Dura Emulsion Test Panels measure 3 3/4 by 9 inches. They are made from curl-resistant, stiff paper stock. Several of them fit into an ordinary business envelope.

When you order 3,000 or more panels, you may specify your own advertising message to be imprinted. There is no additional charge for this service!

Mr. Polish Manufacturer, Mr. Jobber:

Here are some of the many practical uses of the Dura Emulsion Test Panel:

Point-of-Sale, T. V. and Motion Picture Demonstrations

Direct Mail Campaigns

Batch Testing and Production Records

Time-Saving Laboratory Evaluation of New Polish Formulas

Testing of Plasticized Polymer Emulsions for Film Uniformity

Many floor polish manufacturers rely on the Dura Emulsion Test Panel to give them quick, accurate answers in merchandising, production and development.

To: Dura Commodities Corporation, 20 Vesey Street, New York 7, N. Y.

Please supply pieces Dura Emulsion Test Panels.

☐ Payment Enclosed

☐ Bill Us

☐ C. O. D.

Prices: 500 to 2999 pieces
3,000 to 8499 "
8,500 pieces upward

\$5.00 per Hundred
4.50 " "
3.80 " "

Ordinary Parcel Postage to U. S. and Canadian destinations included. No C.O.D.'s on orders calling for special printing of advertising messages.

Firm

Authorized Signature

Address

City

Zone

State



DURA COMMODITIES CORPORATION

20 VESEY STREET
NEW YORK 7, N. Y.

NEW
*kid glove
treatment
helps our
hottest bomber
keep cool*

Special polish with low-abrasive Celite guards the B-58's sensitive skin

Now J-M Celite* has a national defense assignment—helping our newest A-bomber, the Convair B-58 "Hustler," run at supersonic speeds!

Everything about this high-performance aircraft, right down to its gleaming metal skin, says "speed." This high-luster, low-friction surface has been called one of the most vital achievements in modern aircraft development.

To maintain this precision skin—without damaging or scratching the special metal alloys—Convair has specified a new polish-cleaner called *Once!*† The only abrasive in *Once!* is Snow-Floss, a unique polishing grade of Celite. Because of the porous, thin-walled structure of its diatomite particles, *Snow-Floss* never scratches. Each particle collapses like a micro-

scopic buffer, removing foreign matter and maintaining a precision smoothness that lasts.

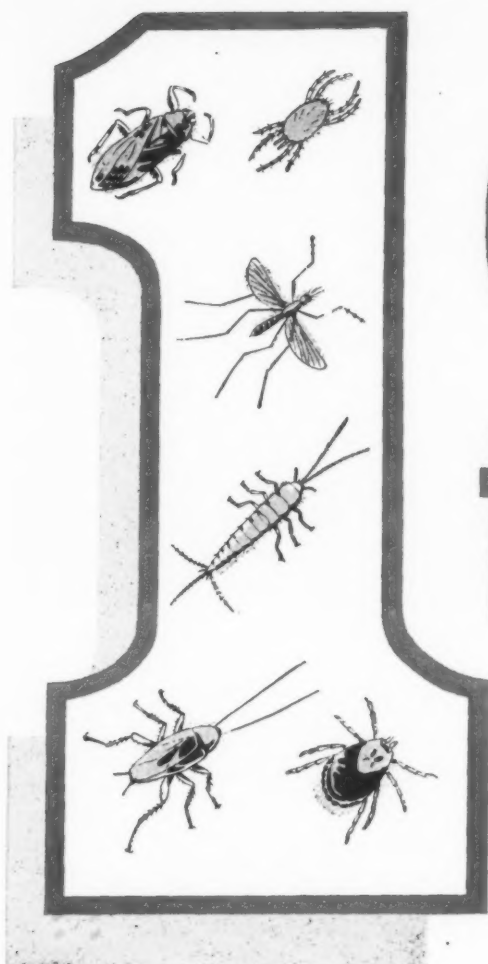
Snow-Floss provides easier application and rub-off, too. Highly absorptive, it soaks up and retains dirt and grease films that would otherwise resist rub-off and reduce sheen. This explains why it has gained acceptance as the major abrasive in all types of polishes.

Snow-Floss and the other Johns-Manville Celite grades produced for polishes are carefully controlled from bag to bag. Find out which fits your needs . . . call your nearby Celite engineer or write direct. Johns-Manville, Box 14, New York 16, N.Y. In Canada, Port Credit, Ont.

*Celite is Johns-Manville's registered trade mark for its diatomaceous silica products.
†Once! is a registered trade mark of the American Silicone Company, Englewood, Colorado.

JOHNS-MANVILLE





dieldrin treatment

**SOLVES YOUR MAJOR
INSECT PROBLEMS**

QUICK, EFFECTIVE and economical control of insects in industrial plants is paramount to good sanitary practices. That's why more and more maintenance and sanitation engineers are using dieldrin for eliminating most of their major insect problems.

Dieldrin kills cockroaches, mosquitoes, waterbugs, silverfish, ants, spiders, centi-

pedes and many other annoying and health-endangering insects. And important too, dieldrin is long lasting. It keeps on killing insect pests long after initial application.

Complete information on dieldrin can be obtained by contacting any pest control operator or the nearest Shell Chemical Company office.

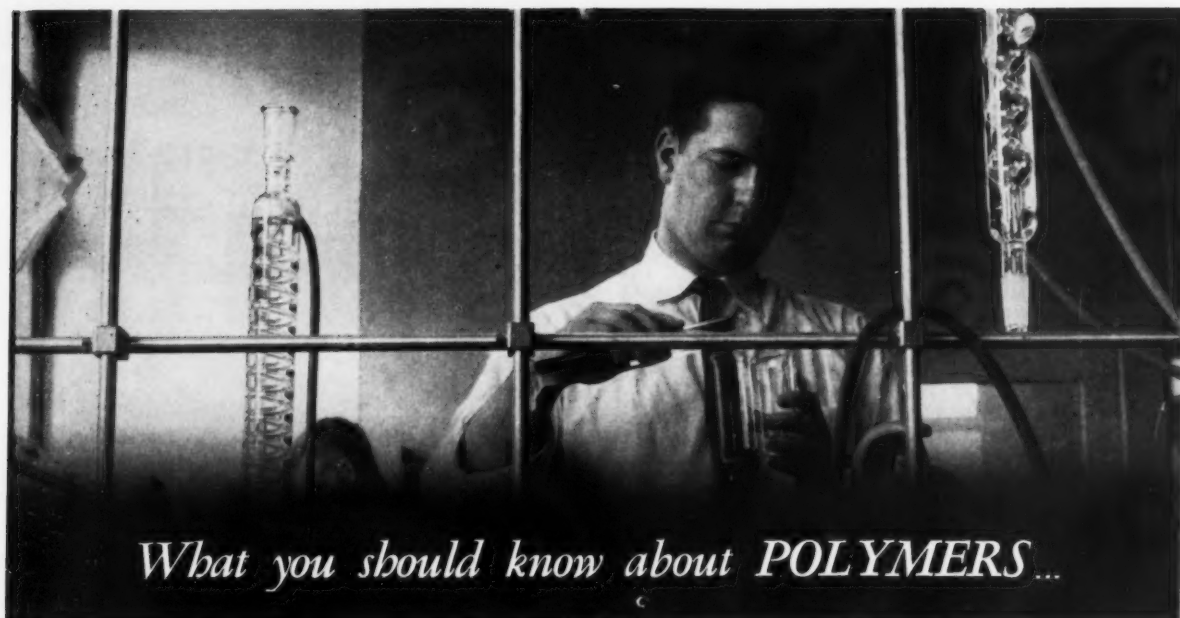
SHELL CHEMICAL COMPANY

AGRICULTURAL CHEMICALS DIVISION

110 West 51st Street, New York 20, New York

ATLANTA • NEW ORLEANS • ST. LOUIS • SAN FRANCISCO





What you should know about POLYMERS...

In the short span of seven years, you've heard and read a great deal about the polymers that have revolutionized the floor polish industry. Although the list of available emulsions is impressive, 9 out of 10 floor polish manufacturers still stand by the polymers that outpace and outperform all others . . .

UBATOL

As a series of styrene and acrylic based polymer and co-polymer emulsions, UBATOLS are known for their standout features in the areas of GLOSS and DURABILITY. The specific UBATOL you select for use in your formulation has several distinctions which make it unique. Let's examine their character **one by one.**

The **U-2000 UBATOL series of polystyrene emulsions** provide an excellent base for high gloss floor polishes because of their ultra fine particle size.

U-2001 UBATOL was the first of its kind to make a debut into the floor polish industry and remains today as the standard of the industry. In fact, all of the floor polish made from this polymer since 1953 would amply cover the state of Texas. U-2001 adds **toughness** and **water resistance** to floor polishes with the added advantage of **recoat-ability.** Formulations made up with this polymer ably resist "whitening" when "second coated"

U-2003 UBATOL has one third the particle size of U-2001 (for greater gloss) and an increased solids content from 36 to 40%.

U-2007 UBATOL is a milky white polymer which was developed to meet the demand for a

clear, non-yellowing, floor polish. Because of its exceptional gloss and film clarity, U-2007 is primarily recommended for household floor polishes.

The **U-3000 UBATOL series of acrylic emulsions** are used as modifying components to improve the toughness and water resistance of polishes compounded with the U-2000 series. In some cases, these polymers are used to improve the "whiteness" of a floor polish. They include:

U-3040 UBATOL . . . Its use will result in hard, tough films.

U-3045 UBATOL . . . Will give flexible, tough films.

U-3050 UBATOL . . . Compromises in hardness between U-3040 and **U-3045 UBATOL.** The compatibility of U-3050 with every known wax and resin on the market makes it a potent companion to the U-2000 series.

U-3101 UBATOL . . . Unlike other polymers in the 3000 series, U-3101 UBATOL is a light colored, non-film forming acrylic which, in itself, can be compounded into a floor polish or used as an additive with U-4001 UBATOL. U-3101 combines toughness with built in removability and is recommended for buffable and household formulations.

U-4001 UBATOL stands apart from other U B S polymers. This floor polish component is unique because it combines the excellent gloss of the styrenes with the toughness and durability of the acrylates. U-4001 is rated tops for film clarity.

So, if you have yet to select the right UBATOL for your formulations, drop us a line. Samples, technical data and product consultation available on request.



U B S CHEMICAL COMPANY

A Division of A. E. STALEY Manufacturing Company
491 MAIN STREET, CAMBRIDGE 42, MASS.

Disinfectants for Bedding

(From Page 133)

3. Since most tap waters have a pH in the range of 8.5 to 9.0 and bleaches are alkaline, add $1\frac{1}{2}$ ounces of cooking vinegar (five per cent acetic acid) to each 10 gallons of solution to lower the pH level and increase bactericidal efficiency.

4. Immerse contaminated bedding for 15 to 30 minutes.

5. Launder in washer, using hot water, and add the same amounts of bleach and vinegar to rinse cycle.

B. Hydrogen Peroxide

1. In general, this agent can be applied to all types of fabrics, including silk and wool. (29)

2. Hydrogen peroxide is available as a 3% solution. Add $1\frac{1}{2}$ pints to 10 gallons of lukewarm water (75° to 95° F). This solution contains approximately 560 p.p.m. of hydrogen peroxide or is a 1:53 dilution.

3. Add one ounce of vinegar, because acidification increases the germicidal efficiency of hydrogen peroxide.

4. Soak contaminated bedding and clothing for a minimum of four hours.

5. Launder in home washer, using hot water, and add same amounts of hydrogen peroxide and vinegar to rinse cycle. In laundering wool blankets and clothes, the temperature of the water should not exceed 100° to 110°F.

C. Sodium Perborate

1. In general, this agent can be used on all types of fabrics, including silk and wool. (29)

2. Add eight ounces to 10 gallons of lukewarm water (75°-95°F) and acidify with one-half pint of vinegar. So-

dium perborate is alkaline and thus its efficiency can be increased by acidification. Since sodium perborate contains one-third of its weight as hydrogen peroxide, this will result in a solution containing approximately 2000 p.p.m. hydrogen peroxide, or a 1:160 dilution of sodium perborate.

3. Soak contaminated bedding and clothing overnight.

4. Launder in home washer, using hot water, and add the same amounts of sodium perborate and vinegar to the rinse cycle.

D. Phenolic Disinfectants

1. Usually available as saponified solution of ortho hydroxy diphenyl and cresylic acid.

2. Add $2\frac{1}{2}$ tablespoonfuls to one gallon or 10 ounces to 10 gallons of lukewarm water (75° to 95°F). This will result in a 1:128 dilution containing approximately 200 p.p.m. of active ingredient.

3. Soak contaminated bedding and clothing overnight and launder in home washer, using hot water.

E. Quaternary Ammonium Compound

1. Usually available on the market as a 10 per cent solution.

2. Add five ounces of a 10% solution to 10 gallons of lukewarm water (75° to 95° F). This will result in a 1:256 dilution containing about 400 p.p.m. of active ingredient.

3. Soak contaminated bedding and clothes for one to two hours.

4. Launder in home washer, using hot water, and add a similar amount of the ger-

micide to the rinse cycle.

F. Formalin

1. Formalin is available as a 37 to 40 per cent solution of formaldehyde in methanol and water.

2. Add $\frac{1}{2}$ pint of Formalin to 10 gallons of lukewarm water (75° to 95°F). This will result in a 1:160 dilution containing 2,300 to 2,500 p.p.m. of active ingredient.

3. Soak contaminated bedding and clothing overnight.

4. Launder in home washer, using hot water.

G. Iodine Complexes

1. Available in aqueous solution with or without surfactants.

2. On the basis of the amount of active titratable iodine indicated by the manufacturer, add sufficient iodine complex to 10 gallons of lukewarm water (75° to 95° F.) to obtain a final concentration of 100 p.p.m. of titratable iodine.

3. Soak contaminated linen for from 15 to 30 minutes.

4. Launder in home washer, using hot water.

5. It is recommended that unstarched linens only be treated in this manner. Starched linen if so treated takes on a bluish color, which is removed in ordinary laundering practices.

These proposals are not suggested for routine home laundering of bedding and clothing, but only when there is a specific need for the disinfection of fabrics contaminated with potential pathogens.

It is advisable to cover mattresses with a fabric, plastic or other cover. Fabric covers can be laundered and disinfected by one of the methods described above. Plastic covers may be disinfected by swabbing the surface with one of the germicides mentioned above. Airing and exposing to sunlight of used mattresses has been practiced, but the bactericidal effect

*whatever your formulation need—
there is a*

GEIGY INSECTICIDE

to help you get

KNOCKDOWN

POSITIVE KILL

SAFETY

LONG RESIDUAL ACTION

BROAD SPECTRUM CONTROL

DIAZINON 20S INSECTICIDE

Oil solution containing 1.5 lbs. of Diazinon per gallon. For formulation of 0.5% residual household sprays, including low pressure aerosols. Controls cockroaches and other household insects, including resistant strains. Effective, long residual action. Available in 5 and 30 gallon drums.

METHOXYCHLOR "90" INSECTICIDE

Contains 90% technical methoxychlor for the preparation of household sprays and aerosols, livestock sprays, and other products requiring methoxychlor in the finished solution. Reliable, safe, economical, broad spectrum action. Available in 100 pound drums.

ORIGINATORS OF  DDT INSECTICIDES

GEIGY AGRICULTURAL CHEMICALS • Division of Geigy Chemical Corporation • Saw Mill River Road, Ardsley, N.Y.

of this procedure is questionable.

Summary

A review of key literature references relating to the numbers and types of organisms found in contaminated bedding and clothing is presented.

Data on the commercial disinfection of mattresses and pillows show that dry heat alone at 230°F for two hours or a combination of dry heat (230°F for two hours) and one quart of formalin per 1,000 cubic feet in commercial chambers was not efficient to accomplish sterilization. Gaseous disinfectants, such as ethylene oxide in combination with carbon dioxide or with halogenated hydrocarbons or beta propiolactone, have been shown to be effective sterilants for bedding materials and clothing.

Commercial laundering, when conducted according to recommended practices and followed by ironing, effectively reduced the numbers of microorganisms in bedding and clothing. Recontamination can occur during spin drying, drying in laundry rooms, and on sorting tables. Germicidal rinses before laundering and in the rinse cycle resulted in a significant decrease in the bacterial counts of bedding linen and clothing and minimized contamination of subsequent batches.

Data on the efficiency of home automatic clothes washers show that good washing action, an effective detergent, water above 145°F, wash cycle of 10 to 20 minutes, and use of an effective germicide in the rinse cycle, will effect a 99 per cent reduction in numbers of bacteria in bedding linen and clothes and avoid cross contamination of different batches of materials.

Disinfection of mattresses, pillows, bedding linen, and clothing in homes is not as well defined as in hospitals and commercial laundries. Using a limited number of agents readily available in the

pharmacy and retail market, directions are suggested for their use in the disinfection of bedding linen, blankets and clothing in the home.

Acknowledgment

The author wishes to acknowledge the technical assistance of Shih L. Chang, M.D., Dr. P. H., Water Supply, Pollution Program, Public Health Service, in the preparation of the section on "Germicidal Rinses for Home Use."

- (12) Barnes, M. E. A public health role for the laundry. *Am. J. Public Health*, 35:1277 (December) 1945.
- (13) Phillips, C. R. The sterilization action of gaseous ethylene oxide II. Sterilization of contaminated objects with ethylene oxide and related compounds. *Am. J. Hyg.*, 50:280 (November) 1949.
- (14) Kolb, R. W. and Schneiter, R. The germicidal and sporicidal efficiency of methyl bromide for *Bacillus anthracis* J. *Bacteriol.*, 59:401 (March) 1950.
- (15) Lloyd, R. S. and Foter, M. J. Efficiency of dry heat and formaldehyde in sterilizing used bedding. *Public Health Reports*, 70:810 (August) 1955.
- (16) Phillips, C. R. Gaseous sterilization. Antiseptics, Disinfectants, Fungicides, and Chemical and Physical Sterilization. Edited, G. F. Reddish, Lea and Febiger, Philadelphia, Pennsylvania, 1957.
- (17) Phillips, C. R. Gaseous sterilization. First Annual Series of Becton, Dickinson Lectures on Sterilization. February 25, 1958.
- (18) Kaye, S. and Phillips, C. R. The sterilizing action of ethylene oxide IV. The effect of moisture. *Am. J. Hyg.*, 50:296, 1949.
- (19) Lloyd, R. S. and Thompson, E. L. Gaseous sterilization with ethylene oxide. American Sterilizer Company, Erie, Pa., 1958.
- (20) Hoffman, R. K. and Warshowsky, B. Beta propiolactone as a disinfectant. *Appl. Microbiol.*, 6:358, 1958.
- (21) Beta-Propiolactone (BPL). Tech. Bull. No. 0818-1, Wilmot Castle Co., Rochester, N. Y., February 1959.
- (22) Lloyd, R. S. and Foter, M. J. Survey of State regulations pertaining to the sterilization of feathers and down. July 1954 (Unpublished report).
- (23) Ravenholt, O. H.; Baker, E. F., Jr.; Wysham, D. N.; and Geidt, W. R. Disinfection of blankets with a synthetic phenolic compound. *University of Minnesota Med. Bull.*, 29:421 (May 1) 1958.
- (24) Klarmann, E. G. Hospital infection and environmental disinfection. *Maintenance and Sanitary Supplies*, 4, March and April, 1959.
- (25) Latief, M. A.; Goldsmith, M. T.; Friedl, J. L.; and Stuart, L. S. Bacteriostatic, germicidal, and sanitizing action of quaternary ammonium compounds on textiles. III. Disinfection of cotton fabric. *J. Pediatr.*, 40:599 (May) 1952.
- (26) Goldsmith, M. T.; Latief, M. A.; Friedl, J. L.; and Stuart, L. S. Adsorption of available chlorine and quaternary by cotton and wool fabrics from disinfecting solutions. *Appl. Microbiol.*, 2:360 (November) 1954.
- (27) Blowers, R. and Wallace, K. R. The sterilization of blankets with cetyl trimethylamine bromide. *Lancet*, 268:1250 (June 18) 1955.
- (28) Unpublished data. Research Laboratories, Procter and Gamble Company, Cincinnati, O.
- (29) Fligor, A. O. and Trimble, P. G. Spotting Manual of Dry Cleaning. *National Cleaner and Dyer*. New York, N. Y. 1945.

— ★ —

Tolerances for Lindane

Tolerances for residues of lindane insecticide were established recently by the Secretary of Agriculture as follows: Ten parts per million in or on mushrooms; seven parts per million in or on the fat of meat from cattle, goats, and sheep; four parts per million in or on the fat of meat from hogs. Lindane is the gamma isomer of benzene hexachloride.

— ★ —

Honor Billing of Hercules

Wyly M. Billing, vice-president of Hercules Powder Co., Wilmington, Del., received the 1960 Honor Award last month of the Commercial Chemical Development Association at its Honor Award Banquet in New York. More than 500 association members were present to see Dr. Billing receive the award. It was presented in recognition of Dr. Billing's pioneering efforts in the field of commercial development; his career devoted to the application of its principles leading to the development, establishment, and growth of the Hercules synthetics department; and his inspiration, guidance and development of younger men in the field, according to W. J. Riley, president of CCDA.

**MODERNIZE YOUR
FLOOR POLISH
8 WAYS WITH**

CARDIS #8 POLYMER

The demand for high-gloss floor polish that assures longer wear with less care is increasing fast. That's why the demand for Cardis Polymer[®] 8 is increasing fast!

Only Cardis Polymer[®] 8 gives you all these 8 sales and service advantages:

1. New method of emulsification takes the place of plasticizers — assures perfect compatibility of wax and wax-like emulsions with polymers, shellac, resins — and results in one homogeneous emulsion.
2. High molecular weight (about 14,000) as opposed to the widely-used synthetics in 2,000-3,000 molecular weight range. Assures hard, yet tough, uniform film that's longer-lasting even under heavy traffic.
3. Luxurious gloss . . . no rub, no buff.
4. Superior hardness requires no fortifying additions of expensive natural waxes.
5. Amazing wear-resistance due to greater resiliency, rubber-toughness and strength. The brilliant film is practically self-healing — scratches disappear with effortless buffing.
6. Water-resistance, soil-resistance . . . never tacky.
7. Natural anti-slip characteristics.
8. Exclusive! Only product of its kind providing these superior characteristics. A unique Warwick Wax development — protected by patents.

For technical assistance on formulations, Warwick Wax chemists are at your service. Write or phone today for samples, prices and distributor lists. Stock and service centers in 33 principal cities assure prompt delivery and service.

WARWICK WAX

Warwick Wax Division • The Western Petrochemical Corporation • 2 West 45 St. • New York 36, N. Y. • MU 7-8220
Midwest Office: Bell Savings Building • 79 West Monroe Street, Chicago 3, Illinois • AN 3-3808

creative wax and polymer chemistry for your better products of tomorrow





Fogging with LETHANE 384 in Cape May County, New Jersey.

**Most effective
knock-down agent
for fogging...**



HEAT-STABLE LETHANE 384 is unaffected by high temperature as it passes this critical hot zone on the fogging machine.

LETHANE 384

Anyone faced with the problem of controlling mosquitoes . . . and the responsibility of using public or private funds to accomplish it . . . should be totally familiar with LETHANE 384. Highest percentage of knock-down and kills is assured when LETHANE 384 is used as recommended in fogging concentrates and adulticiding sprays . . . alone, with DDT or with malathion. Be sure your mosquito control program is built around economical, heat-stable LETHANE 384. Write to our Sanitary Chemicals Dept. for complete information.



Chemicals for Industry
**ROHM & HAAS
COMPANY**
WASHINGTON SQUARE, PHILADELPHIA 5, PA.

LETHANE is a trademark, Reg. U.S. Pat. Off. and in principal foreign countries.

SOME PERFORMANCES HAVE NEVER BEEN EQUALLED—



STANDARD FOR SKYSCRAPERS—Reaching majestically 102 stories and 1,250 feet into the sky, the Empire State Building is the world's tallest. In addition, a 222-foot television antenna towers above the building. Revolving searchlights installed on the 90th floor can be seen 300 miles away. More than 1,000,000 people visit the observation floor annually.

Look at Pine Oil

Someday someone may build a taller building than the Empire State Building—but it hasn't been done yet. And someday someone may invent a better all-round ingredient for disinfectants and cleaning compounds than pine oil—but as yet pine oil remains the standard.

Pine oil, of course, adds much more than a pleasant scent to compounds. Its wetting properties, solvent action, bactericidal properties, and safety are well known.

Pine oil, which has been in short supply for many years, is now readily available due to increased productive capacity. Look to Hercules for all the pine oil you need.

And look, too, at Hercules® pine oil's performance as a high-powered solvent:

	Kauri-Butanol Value
Pine Oil	500+
Toluol.....	105
Naphtha, H.A.....	95
Turpentine.....	55
Naphtha, VM&P.....	34
Mineral Spirits.....	32
Kerosene.....	23

When everything is considered, pine oil still remains the outstanding ingredient for quality cleaners and disinfectants.

Pine Chemicals Division, Naval Stores Department
HERCULES POWDER COMPANY
INCORPORATED
 900 Market Street, Wilmington 99, Delaware



NY60-1C

NEW FREEDOM IN THE FORMULATION OF AEROSOLS AND PROTECTIVE FILMS **PVP/VA COPOLYMERS**

Vinylpyrrolidone/Vinyl Acetate Copolymers

AVAILABLE IN SEVERAL FORMS AND RATIOS FOR DIVERSIFIED APPLICATION

E-SERIES—50% COPOLYMER SOLUTIONS IN ETHANOL Four different monomer ratios for flexibility in the creation of products such as hair sprays and tints, shampoos, wave-set lotions, protective bandages and masks, and spray gloves.

I-SERIES—50% COPOLYMER SOLUTIONS IN ISOPROPANOL Three separate monomer ratios for utilization in non-cosmetic products such as tinted decorative sprays, antitarnish coatings for metals, shoe polishes (white and colored), and protective leaf sprays.

S-COPOLYMER—SOLID Designed for uses requiring a dry, high-molecular weight, solvent-soluble, water-redispersible copolymer.

W-COPOLYMER—40% AQUEOUS EMULSION Adaptable for use in many fields including general adhesives, heat-set inks, paints, label adhesives, textile sizes, non-woven fabrics, paper coating and others.

For more detailed information about which of the PVP/VA Copolymers best suits your requirements, write for our 20-page technical bulletin.

From Research to Reality

ACETYLENE CHEMICALS DEPARTMENT

ANTARA[®] CHEMICALS

A SALES DIVISION OF

GENERAL ANILINE & FILM CORPORATION

435 HUDSON STREET • NEW YORK 14, NEW YORK

ANTARA

5=f

POLYVINYL CHEMICALS

Specialists In Emulsion Polymers

Looking for a New twist for your Floor Polishes?

These All-Acrylic Polymers can spark new ideas

NeoCryl A349

Produces unusually hard films, making possible new and different types of formulations based entirely on acrylic polymers . . . without plasticizers! Floor polishes formulated with NeoCryl A349 have outstanding

wearing qualities which are highly resistant to scratching and scuffing.

Also very light in color, this all-acrylic polymer imparts a deep, rich gloss and is ideal for both buffable and non-buffable polishes.

NeoCryl A234U

Successful beyond expectations over the span of the past several years, NeoCryl A234U is now the leading acrylic in the floor polish industry. Ideal for both straight

acrylic and styrene-acrylic blend formulations, NeoCryl A234U contributes film clarity, gloss, lightness of color and will not yellow or embrittle with age.

Write for samples and technical bulletins.

POLYVINYL CHEMICALS, INC.

26-24 Howley Street, Peabody, Massachusetts

Capitol's New Aerosol Filling Plant

HIGH speed, heavy capacity, and versatility are claimed for the newly built aerosol loading plant of Capitol Packaging Co., Melrose Park, Ill. Equipment includes three new stainless steel pressure filling lines, one of which is high-speed rotary. A new, improved propellant storage and blending system has also been installed, the firm reports.

Capitol can now load more than 25 million aerosol packages per year. Products handled by the company range from household cleaners and protective coatings to cosmetics and shaving cream.

The three lines can be operated simultaneously on three different jobs. At times, one line may process orders as small as 150 cans of touch-up paints, while another may be turning out an order for 100,000 cans. There are separate facilities for filling solvent and water-based materials.

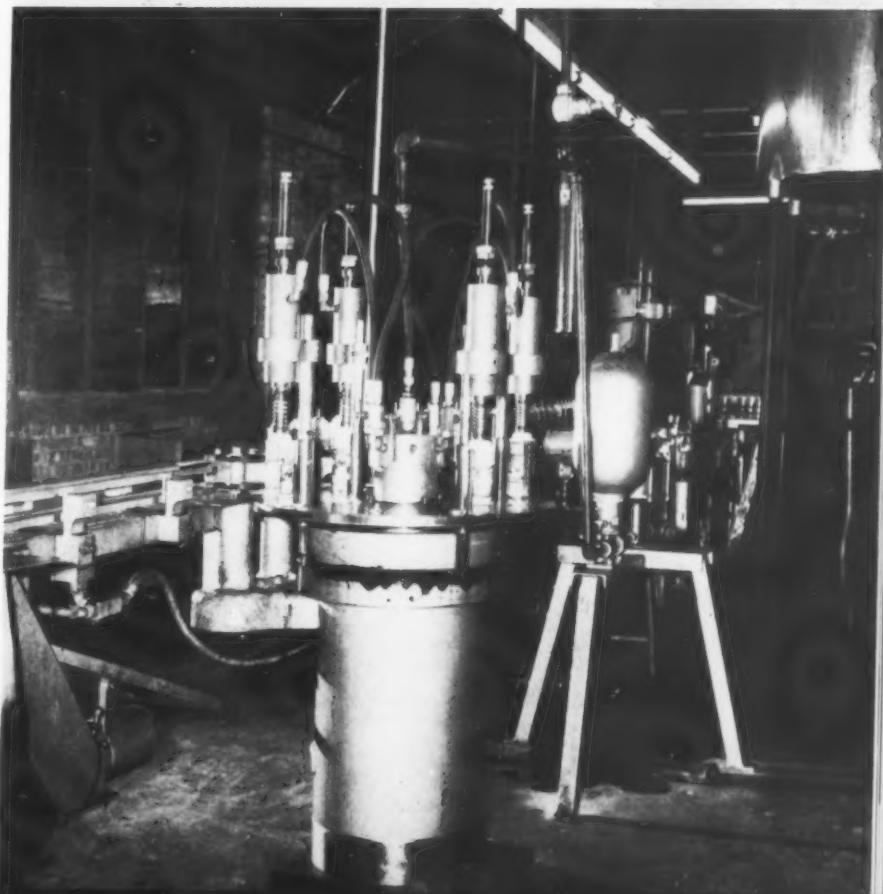
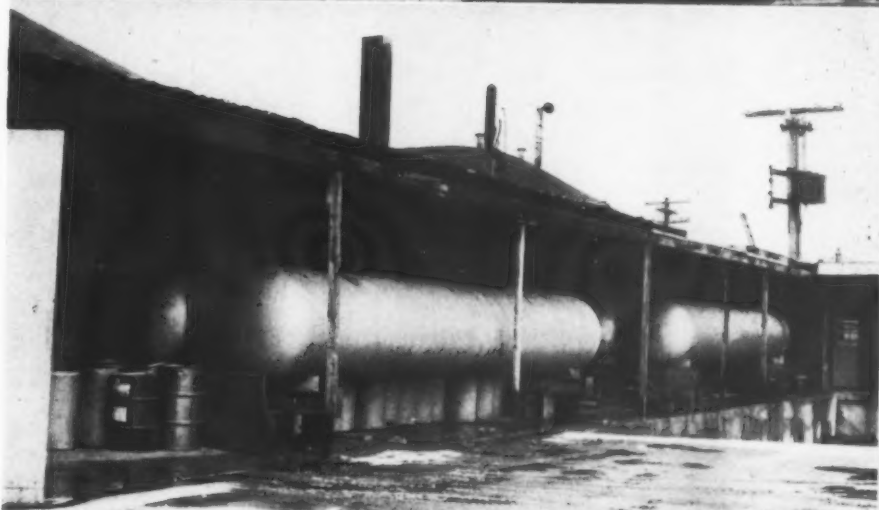
Capitol's new plant and entire operation have been set up to accommodate the private label trade exclusively. By not marketing products under its own label, the company believes it frees itself of any conflict of interests. Laboratory and research facilities are maintained to serve the needs of private label customers.

"We're set up for the fellow in a hurry," says Norman Weiner, general manager and co-founder of

NEW PLANT of Capitol is located ideally for trucking on an intersection of the Illinois Tollways.

PROPELLANT STORAGE facilities include new blending equipment that permits Capitol to make up any specified propellant mixture.

EMPTY CANS are fed into one of three pressure-type aerosol loading lines at Capitol Packaging. The company claims its high speed pressure lines compete favorably with cold-fill lines.



**"Delivery this
afternoon, GREAT!"**



**"We depend on the SOLVENTS
and CHEMICALS GROUP!"**



On-time delivery is more than a service with The Solvents and Chemicals Group . . . it's an art! Each Solvents and Chemicals group salesman takes **special** pains to understand the delivery requirements of every account he services. With these firmly in mind, he discusses them with our personnel skilled in moving packaged or bulk products quickly at maximum economy to the purchaser. From these conversations, delivery schedules are evolved which take into consideration your receiving facilities . . . volume requirements . . . plant location . . . and type of product ordered. See for yourself if this genuine interest in your problems isn't the most economical way to get fast delivery of —————→

Petroleum Naphthas, Alcohols and Acetates, Alkanolamines, Alkalis, Coal Tar and Petroleum Aromatic Solvents, Chlorinated Paraffins, Chlorinated Solvents, Glycerine, Glycols and Glycol Ethers, Ketones and Esters, Plasticizers, Resins, Resinates, Rosins, Terpene Solvents, Waxes.

THE SOLVENTS AND CHEMICALS GROUP, 2540 W. FLOURNOY STREET, CHICAGO 12, ILLINOIS



Buffalo, Bedford 1-572 • Chicago, SEeley 3-0505 • Cincinnati, Elmhurst 1-4700 • Cleveland, Clearwater 2-1100
Dallas, FEderal 1-5428 • Detroit, WAInut 1-6350 • Erie, Glendale 6-3951 • Fort Wayne, Anthony 0213
Grand Rapids, CHerry 5-9111 • Houston, ORchard 2-6683 • Indianapolis, MEIrose 8-1361 • Kansas City, CHestnut 1-3223
LaCrosse, 2-3011 • Louisville, EMerson 8-5828 • Milwaukee, GReenfield 6-2630 • New Orleans, VEron 3-4666
Rochester, LOcust 2-5980 • St. Louis, GArfield 1-3495 • Santa Fe Springs (Los Angeles), UNiversity 4-7711 or SPruce 3-3628
Toledo, JEfferson 6-3771 • Windsor, Ontario, Clearwater 2-0933

the firm. "We can start up a line on a few hours' notice and, if necessary, run it for weeks. Costwise, we can compete with any type of filling operation in the business.

A mechanical engineer, Mr. Weiner has had considerable experience in the packaging field, particularly in contract packaging. His partner, Dr. Jerome J. Siegel, the firm's technical director, taught physical chemistry at the University of Chicago, and Michigan State University. In recent years he has also practiced as a consultant on halogenated hydrocarbons.

The new plant provides 30,000 square feet of floor space indoors and 40,000 square feet of storage area outside. The site, in a Chicago suburb, located close to the intersection of the north-south and east-west roads of the Illinois Tollways, is favorable for truck shipping. Facilities also include a spacious warehouse.

New Pressure Container

A new 10-pound water capacity disposable cylinder for working pressures up to 240 psi was introduced late in April by Tube Manifold Corp., 415 Bryant Street, North Tonawanda, N. Y. Five inches in diameter and 16½ inches

long, it is claimed to be the only disposable metal container of its size now available. Fields of application include aerosols, insecticides, agricultural sprays, industrial and commercial sprays, etc.

The new disposable container is a companion to the firm's two, three, and five pound water capacity cylinders.

Aerosol Information

Aerosol's 8,000 per cent growth in 10 short years is outlined in a new 28 page brochure available from Continental Can Co., 100 East 42nd Street, New York 17. Entitled "The Magic of Aerosols," the booklet traces the aerosol's evolution from the World War II bug bomb to the elegant lithographed pressure package of today, used to dispense more than 160 assorted products. About 500 million containers were produced in 1959; the industry expects to turn out one billion units in 1963.

Continental's full line of cans is described and listed with specifications. Their suitability for different products is indicated. The firm's research activity in this field are briefly covered and availability of aluminum cans for experimental purposes is indicated.

A list of pressurized products is included. A directory of contract fillers is alphabetically arranged and manufacturers of valves and propellants are listed.

Dial 'Ucon' Staff Direct

New direct dial telephone numbers have been assigned to most contacted personnel at Union Carbide Chemical Co.'s fluorocarbon division, it was announced late in April.

The new numbers are:

John R. Hulten, manager, fluorocarbon division — LL 1-4811

E. E. Husted, sales manager, "Ucon" propellants — LL 1-4813

H. Robert Dobbalaer, office manager, "Ucon" propellants — LL 1-4816

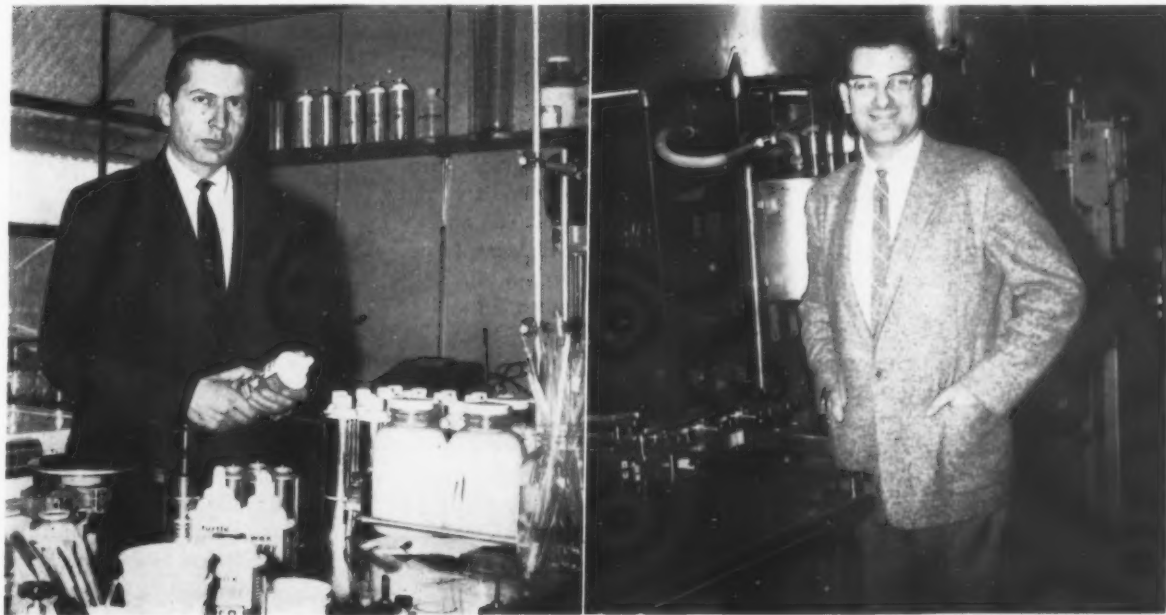
Arthur B. Chivvis, sales representative, "Ucon" propellants — LL 1-4819.

Snell Acquires Sperling

Foster D. Snell, Inc., New York Chemical and engineering consultants, recently acquired Sperling Laboratories, Arlington, Va., which specializes in acute and chronic toxicity studies, preparation of petitions to the Food and Drug Administration for clearance of drugs and food-additive.

Dr. Jerome J. Siegel, left, co-founder and technical director of Capitol, supervises new product development. Norman

Weiner, general manager, founded the firm in 1955 with Dr. Siegel. Mr. Weiner is a mechanical engineer.



Food Additives Amendment

By John D. Conner and Robert L. Ackerly

Cummings, Sellers, Reeves and Conner,
Washington, D.C.

ON September 6, 1958, Public Law 85-929 was approved, amending the Federal Food, Drug and Cosmetic Act by defining and regulating food additives. This amendment became effective six months from the date of approval. However, with respect to substances used commercially prior to January 1, 1958, the Act became effective one year later, March 6, 1960. The Secretary of Health, Education and Welfare has authority to extend the effective date of the Act until March 6, 1961, for specific commercial uses of an additive, upon a finding that such extension involves no undue risk to the public health and that conditions exist which necessitate the extension.

The Food Additives Amendment, by amending the Federal Food, Drug and Cosmetic Act incorporates the enforcement procedures of that Act. The purpose of the amendment was described by the House Committee as: (1) to protect the health of consumers by requiring manufacturers of food additives and food processors to pretest any potentially unsafe substances which are to be added to food; and (2) to advance food technology by permitting the use of food additives at safe levels.

A food additive is defined in the law as follows:

The term "food additive" means any substance the intended use of which results or may reasonably be expected to result, directly or indirectly, in its becoming a component or otherwise affecting the characteristics of any food (including any substance intended for use in pro-

ducing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food; and including any source of radiation intended for any such use), if such substance is not generally recognized, among experts qualified by scientific training and experience to evaluate its safety, as having been adequately shown through scientific procedures (or, in the case of a substance used in food prior to January 1, 1958, through either scientific procedures or experience based on common use in food) to be safe under the conditions of its intended use; except that such term does not include —

(1) a pesticide chemical in or on a raw agricultural commodity; or

(2) a pesticide chemical to the extent that it is intended for use or is used in the production, storage, or transportation of any raw agricultural commodity; or

(3) any substance used in accordance with a sanction or approval granted prior to the enactment of this paragraph pursuant to this Act, the Poultry Products Act (21 U.S.C. 451 and the following) or the Meat Inspection Act of March 4, 1907 (34 Stat. 1260), as amended and extended (21 U.S.C. 71 and the following).

A limitation on the exemption for pesticide chemicals is that in the processing of food any residue on a raw agricultural commodity must be removed to the extent possible in good manufacturing practice and the residue in the processed food cannot be great-

er than the tolerance prescribed for the pesticide under the Miller Act. If a residue of a pesticide chemical remains in the processed food in excess of the tolerance established for it on an agricultural commodity the residue in the processed food is subject to the Food Additives Amendment.

We may informally consider food additives in two broad categories:

1. Intentional additives. Substances which are intentionally added to foods, such as preservatives, emulsifiers, flavorings et cetera, and

2. Incidental additives. Substances, which are not intentionally added to foods, but which as a result of their intended use may reasonably be expected to become a part of or otherwise affect the characteristics of a food, such as insecticides, detergents, lubricants and similar materials used on food processing equipment and in food processing plants.

This distinction is not an official classification and if a substance may reasonably be expected to come within either class of additives it is treated the same by the Food and Drug Administration.

There is another classification which may be considered for purposes of clarity and which for lack of a better term we may call "accidental" additives. These are substances which, as a result of their intended use, are not reasonably expected to become a part of or otherwise affect the characteristics of a food but which are used in proximity to foods and may accidentally, or as a result of im-

(Turn to Page 205)



Bareco refining facilities at Kilgore, Texas

IN THESE MODERN REFINERIES WAX IS THE EXCLUSIVE PRODUCT



Bareco refining facilities at Barnsdall, Oklahoma

...NOT A BY-PRODUCT

Bareco Wax Company's entire research and refining facilities are devoted to one purpose: producing the finest, most uniform microcrystalline waxes available. Next time you buy wax, get the many advantages of this Bareco specialization. Bareco can promptly deliver the wax with characteristics best suited to your floor, furniture, or auto polish needs — either from Bareco stocks (the world's largest and most diversified) or made to your specifications. *Write us for technical assistance with any wax problem. You'll receive recommendations and test-proved samples without obligation.*



25th
Anniversary

POL 60-1

**PETROLITE
CORPORATION**

BARECO WAX COMPANY

DIVISION

SALES OFFICE: 917 Enterprise Building, Tulsa 3, Oklahoma

DISTRICT SALES OFFICES:

NEW YORK CITY, 150 East 42nd Street
CHICAGO, ILLINOIS, 332 So. Michigan Ave.
ARDMORE, PENNSYLVANIA, 119 Coulter Ave.

SALES AGENTS:

SAN FRANCISCO, CALIFORNIA,
Gilbreath Chemical Co., 383 Brannan Street
SANTA MONICA, CALIFORNIA,
Gilbreath Chemical Co., P. O. Box 549
ATLANTA, GEORGIA,
Atlantic Chemical & Equipment Co., 874 Ashby, N. W.



Resistant "STAPH"? Use **G-11**[®] (*Hexachlorophene U.S.P.*)

Today, in hospitals throughout the country, increasing emphasis is being placed on programs for the control of staphylococcic infections. In some hospitals and communities these infections have at times approached epidemic proportions.

One important cause of this health hazard is the ease with which the staphylococci develop resistance to antibiotics.

Fortunately, these staphylococci show no resistance to G-11 (Hexachlorophene). It is one of the most, if not the most effective, of all commonly available antiseptics for the treatment of local infections and reducing the spread of staphylococci by preventing colonization on

the skin and transmission via hands and the air.

Ask for complete technical report, "G-11 for Control of Staphylococcic Infections."

Sindar is the discoverer of hexachlorophene and its trade name "G-11" stands for the experience and knowledge gained through the years of widespread use. Our laboratories are staffed and organized to give you the benefits of this pioneer experience. Your inquiries will receive our prompt attention.

SINDAR[®] Corporation

321 West 44th Street, New York 36, New York

SOAP and CHEMICAL SPECIALTIES



Night view of new chemical specialties laboratory of Carbide and Carbon Chemicals Co., New York, in Tarrytown, West-

chester County, suburb of New York City. All Carbide customer research is centered here.

New Chemical Specialties Lab

**Technical service laboratory opened
by Carbide and Carbon Chemicals Co.**

DEVELOPMENT and performance testing of chemical specialties formulations is the main task of workers at the new technical service laboratory officially opened by Carbide and Carbon Chemicals Co., New York, on May 11. Located in Tarrytown, Westchester County, N. Y., the new laboratory houses under one roof Carbide's customer research activities, previously carried on at widely dispersed locations, including South Charleston, W. Va.; Whiting, Ind.; Pittsburgh, Pa.; and laboratories of affiliated companies.

About 100 scientists with supporting and administrative staff will work in the center under the leadership of A. B. Steele, newly

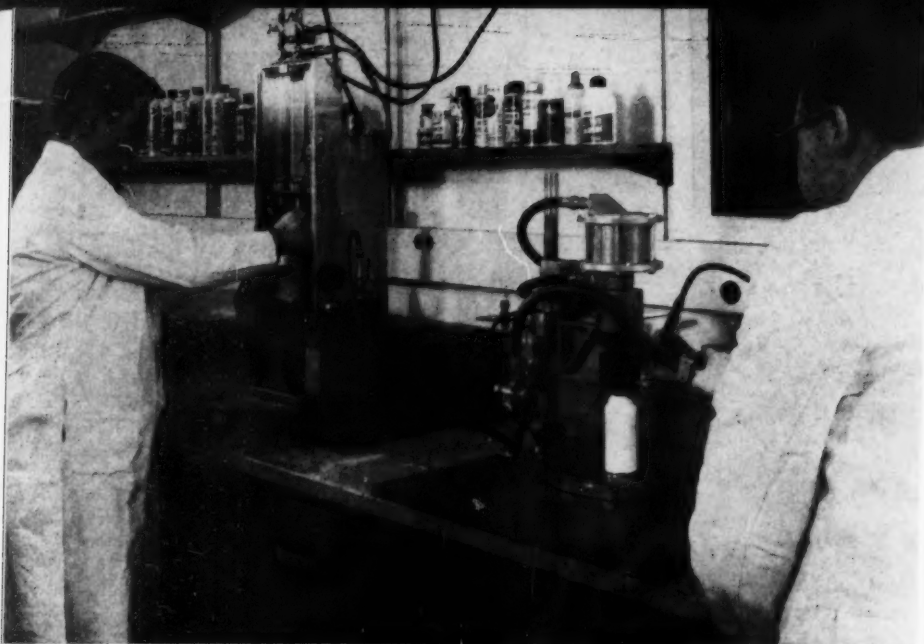
appointed manager and C. P. McClelland, assistant manager of technical service. Their activities will

Dr. A. B. Steele, manager of technical service for Carbide, a newly created post. His headquarters are in New York.



cover automotive specialties such as antifreeze and brake fluids; detergents for household and other applications; surface coatings including floor and furniture polishes; and a wide range of pressure packaged items. Manufacturers of these specialties are consumers of Carbide's glycols, surface active agents, polymers, "Ucon" propellants, and a host of other compounds. In addition to the consumer specialties mentioned above, the team at the center investigates a wide variety of industrial specialties, such as textile chemicals, automotive fuel additives and others.

A three story stainless steel and glass building, the center is 300 feet long and 60 feet wide.

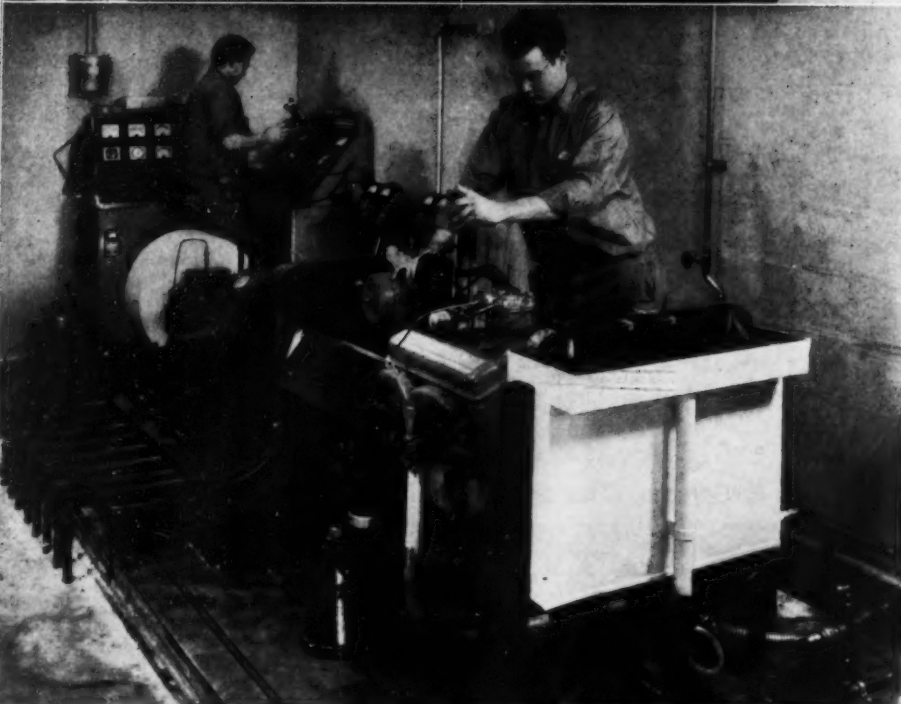


About one third of the space is devoted to administrative offices and public areas. The remainder is divided into 45 laboratories with 33 adjacent offices. Experimental and testing activities of a mechanical nature, requiring large equipment are housed in a two story subsidiary building connected with the main laboratory.

Speaking to guests at the formal opening, May 11, J. A. Field, vice-president — marketing, pointed to the growing need for service efforts to support chemical sales. A modern chemical salesman must offer more than a good product. He must offer also the technical know-how required to help his customers toward profitable application of the product. Actually, Carbide salesmen are either chemists or chemical engineers who have had additional technical service training slanted to this requirement.

Dr. Steele, manager of technical service, a newly created post, joined Carbide's fellowship at Mellon Institute, Pittsburgh, Pa., in 1941 as a trainee. He was appointed senior fellow in 1950. In his new position he makes his headquarters in the New York offices of the company.

Mr. McClelland, assistant manager, joined the Mellon fel-



Aerosol test unit is being loaded with fluorinated hydrocarbon propellant (top picture, left) and valve crimped into place (right) at Carbide's new technical service center. Laboratory is equipped to test all parts and phases of pressure package, carry-out development work on customers' products and screen new products for pressure packaging.



Automotive specialties are performance tested under simulated use conditions in 1959 Chevrolet engine shown in second picture. Standard antifreeze test in this unit equals 40,000 miles at 60 mph level road driving with engine operating at 180°F. Control panel in background can run engine automatically, varying speeds, loads, temperatures to give three sets of conditions.

Possible corrosive effect of antifreeze materials on aluminum parts is being tested in glass reflux condensers shown in bottom photo. Wide range of metals and chemicals can be tested; 48 bottles with six strips of metal each can be run at same time. Average test takes one week.

lowship as a sales trainee in 1936. He was named a product manager in Carbide's fine chemicals division in 1944 and has been responsible for the market development of "Tergitol" surface active agents, "Carbowax" polyethylene glycols, and "Cellosize" hydroxyethyl cellulose.

Analyzing the essential function of the new technical service laboratory in the expansion of sales, Dr. Steele made the following points: Assistance to customers in the correct use of Carbide's products as a means of expanding sales volume in known applications; call attention to changing markets which may affect current sales and offer opportunities for sales expansion; development of new uses for established products; follow up customers' requirements for specific chemicals to determine the need or desirability of improved specification standards; and aid in training and retraining sales representatives.

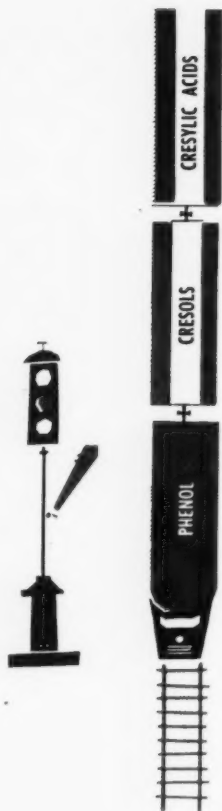
Dr. Steele believes that "By building an outstanding staff of industry experts, who are first rate scientists but sales oriented and interested in solving practical sales problems, the laboratory will best render the type of service for which it is created." ★★

Test wash is processed in Launder-O-Meter (top photo) to evaluate detergents on cotton. Evaluation of detergents for clothes and dishes is large portion of customer service at Carbide's new center. All-purpose, heavy-duty, light duty, liquid, powdered, products are tested for detergency, foaming properties, rinsability, redeposition. Note wide variety of products assembled on shelf above standard washer.

Visitors to Carbide's new technical service laboratory are received in colorful and spacious lobby, shown in second photo. Union Carbide products, such as plasticizers and vinyl resins, have been used in the flooring and polyols in the polyether foam of the upholstery.

Library of technical service laboratory keeps wide selection of current periodicals (bottom picture), a file of projects completed by the organization, and reviews of literature pertaining to customer service work now under way at the laboratory.





JUST A FEW OF THE
Basic Chemicals

available from

REILLY'S
10 strategically placed plants

*Write so that the Reilly representative
nearest you may give you information.*



Send for the Reilly Chemical Index.



REILLY TAR & CHEMICAL CORPORATION

MERCHANTS BANK BUILDING
INDIANAPOLIS 4, INDIANA

Sales Offices in Principal Cities



CREATING NEW "BEST SELLERS"
IS A SPECIALTY OF THE SILICONES MAN

PROFITABLE and complete merchandising of your new products begins in the research laboratory—where the products' features are born!

The Silicones Man specializes in helping you create unusual, sales-building qualities—through the addition of silicones. Some of the most popular items sold today in supermarkets, drug, toiletry, hardware, automotive and other outlets are the result of his cooperation.

At Union Carbide, the Silicones Man has at his fingertips complete, modern research facilities. To these he brings years of field experience in many different areas of application.

Talk to the Silicones Man about your requirements. Write to Dept. EU-4904, Union Carbide Corporation, 30 East 42nd Street, New York 17, N. Y. In Canada: Bakelite Company, Division of Union Carbide Canada Limited, Toronto 7, Ontario.

Unlocking the secrets of silicones
 Rubber, Monomers, Resins, Oils, Emulsions

"Union Carbide" is a registered trade-mark of UCC.



SILICONES



The Shell chemicals listed below are sources for many important commercial products.

Familiar landscape ?

The inquiring chemist explores many interesting product "landscapes" in his work. This photomicrograph shows crystals of *tertiary butyl alcohol* at 65°F. TBA, a Shell chemical with intriguing features, finds its way into a variety of industries.

Shell manufactures more than thirty industrial chemicals—among them *allyl alcohol* and *allyl chloride*. Because of the di-functional nature of these two products, they are used as intermediates in the synthesis of many

important chemicals. Derivatives of allyl alcohol are widely used in drugs and cosmetics. Allyl chloride is an intermediate in the synthesis of resins for thermosetting plastics, varnishes, and adhesives.

Why not become better acquainted with Shell Chemical's products and technical services? Write or phone your nearest district office for our general catalog and information about your specific interests.

Acetone
 Allyl Alcohol
 Allyl Chloride
 Bisphenol A
 Epichlorohydrin
 Ethyl Alcohol
 Ethyl Amyl Ketone
 Glycerine
 Hexylene Glycol
 Hydrogen Peroxide
 Ionol® CP Antioxidant
 Isopropyl Alcohol
 Methyl Isobutyl Carbinol
 Methyl Isobutyl Ketone
 Tertiary Butyl Alcohol

SHELL CHEMICAL COMPANY INDUSTRIAL CHEMICALS DIVISION

Atlanta • Chicago • Cleveland • Detroit • Houston • Los Angeles • Newark • New York • San Francisco
 IN CANADA: Chemical Division, Shell Oil Company of Canada, Limited, Montreal • Toronto • Vancouver



Marketing Specialties

(From Page 115)

A merchandising allowance is another point for consideration. In other words, have you considered and can you afford to pay for the real estate required for the dislocated display referred to? Remember you are competing with 10,000 to 15,000 other items in the grocery stores—all eager to get these plus factors. Does your product lend itself to special deal packs (so much off per package to the consumer or added merchandise for the same price as the regular pack) or couponing (newspaper, direct mail or at the point-of-sale coupon)? Incidentally, it is estimated that grocery manufacturers currently issue about 10 billion coupons annually to consumers with a potential redemption value of about \$1 billion. Coupons have proved to be popular and they add substantially to the amount of money available to the homemaker for buying her groceries. Coupons are particularly effective in the promotion of new products or established products with new features and manufacturers have been quick to take full advantage of them.

Dislocated Displays

Why do we place emphasis on dislocated displays? We have actual case histories, where we have realized as much as a 33⅓% increase in sales by displays of this type. We quote Seth T. Shaw, vice-president, Safeway Stores, Inc., second largest retailer in the industry: "We retailers are in the business of promoting food. We promote 52 weeks of the year . . . at one time we held the view that we didn't want our suppliers trying to tell us how to run our business. Today we want any help you can give us. We welcome ideas . . . ideas that will sell merchandise."

Another vital and most costly aspect of marketing is con-

sumer advertising. Grocery manufacturers are investing in excess of one billion dollars a year in advertising to promote the sale of food products, and they are devoting considerable research effort to make their advertising sell goods even more effectively. Any list such as the "Top 100 Advertisers" includes many food and grocery processors.

Consumer Advertising

I am not going into a lengthy discussion of consumer advertising. Well-qualified agency personnel is available who can effectively and efficiently analyze the requirements of the manufacturer and the specific product involved. The important decision the manufacturer must make is in the area of advertising expenditures. The old formula we refer to constantly is known as *A to S*, or advertising costs to sales. The problem is one of selectivity and individual analysis—what is successful for one product or one manufacturer may not necessarily be successful for another. This question and its importance is pretty well summed up in a statement made by Robert J. Keith, executive vice-president, The Pillsbury Company: "Our problem is no longer to make the goods, *but sell them*. If production were to operate at 1949 efficiency levels, half of American industry would be *out of business*. Similarly, if advertising in 1969 operates at the same level of efficiency as in 1959, many will close shop. We cannot invest 100 per cent more dollars, to produce 10 per cent more sales."

"Marketing" today covers a broad range of different aspects. To be successful you must analyze all of these aspects—relating each in its importance to each of the other aspects being equally as strong in your analysis of your potentials, your approach to distribution, your merchandising techniques, your plus or dislocated display activity, and your consumer advertising campaign.

Every company is striving

for a formula—a formula that applies to its product, its industry, and its company. Once you have arrived at a successful formula (and that *formula* is the important word), you will have a successful marketing operation. These formulae need not be complicated. There are many sources of information available to the smaller company. Statistical and factual knowledge can be adjusted to its own particular requirements. Take a simple fact such as we, in our business, have applied to our operation—20 per cent of the stores do 80 per cent of the business. How many manufacturers would operate today with a sales force out of proportion to the situation? To any of you who are selling or are desirous of selling the grocery industry, I highly recommend the Super-Valu Study by *Progressive Grocer*, which relates every major product category to total sales, shelf position, etc.

Test marketing is vital before committing tremendous monies for production, your advertising budget, etc. Try several different approaches in small areas that can give you definite information—areas you can watch carefully and ones that won't be too expensive if you make a mistake. Planning is important, but you don't find all the "bugs" until you actually offer the product for sale.

Look Into Future

If we feel we have been operating in a highly competitive atmosphere for the past fifteen to twenty years, let's take a look at what the experts refer to as the "fabulous sixties." Most economic forecasts for the '60's predict a growth in the nation's business that borders on the fantastic: gross national product—up \$270 billion; total personal income—up \$220 billion; consumer spending—up \$164 billion. Population might increase as much as 43 million and almost half the nation's families are expected to have incomes in excess of \$7500.

M. ARGÜESO & CO. INC.

MAMARONECK REFINED

WAXES

Importers—Refiners

**CARNAUBA
OURICURY
CANDELILLA**

**Crude—Refined
Bleached—Flaked—Powdered**

BEESWAX

**Crude
Refined
Bleached
Substitutes**

MANUFACTURERS

Cerita Brand



SPECIAL WAXES

OZOKERITES

CERESINS

PALM WAXES

CASTING WAXES

RESIN BLENDS

**Compounding to your
specifications**

**M. ARGÜESO & CO. INC.
441 WAVERLY AVENUE
MAMARONECK, N. Y.**

Owens 8-8500

Cable address: MARGUESO

If these estimates are correct, food and grocery manufacturers can look ahead to a climate of dynamic expansion. Although one leading organization foresees an increase of only about 30 per cent in the rate of consumer food spending by 1970 — just about enough to take care of the population increase—a well-known economist who has studied food spending for many years foresees a potential spending increase of 60 per cent. That, of course, is on the premise that the food industry will take full advantage of its opportunities. Dollarwise, it means that personal consumption expenditures for food, by 1970, could reach more than \$115 billion a year, compared with \$73 billion in 1959. It means that sales of grocery and combination stores could approach the \$75 billion mark, compared with \$46 billion in 1959.

Capturing the tremendous potential business of the '60's will be a difficult job. Competition with other industries for the consumer's dollar will be keener than ever. But this will be an interesting and challenging atmosphere that should keep us all alert. Certainly this is the spirit from which progress is made.★★

Body Lice Control

(From Page 104)

H. A. Jones, and G. H. Culpepper. 1945. DDT powder for the control of lice attacking man. *Jour. Econ. Ent.* 38(2): 210-17.

Carson, N. B., and G. W. Eddy. 1949. Preliminary evaluation of materials as synergists with pyrethrum against the body louse. *Jour. Econ. Ent.* 42(4): 694-9.

Cole, M. M., and G. S. Burden. 1956. Phosphorus compounds as ovicides and adulticides against body lice. *Jour. Econ. Ent.* 49(6): 747-50.

Cole, M. M., P. H. Clark, and D. E. Weidhaas. 1958. Sleeve tests with malathion powders against DDT-resistant body lice. *Jour. Econ. Ent.* 51(5): 741-2.

Cole, M. M., M. D. Couch, G. S. Burden, and I. H. Gilbert. 1957. Further studies on resistance of human body lice to insecticides. *Jour. Econ. Ent.* 50(5): 556-9.

Culpepper, G. H. 1944. The rearing and maintenance of a laboratory colony of the body louse. *Amer. Jour. Trop. Med.* 24(5): 327-9.



MASKOLS

**made for your
special odor
problems**

**Our long experience
in the fields
of:**

Petroleum Products

**Paints and
Varnishes**

**Insecticides and
Repellents**

Household Cleaners

**—enables us to
"FIT OUR MASKS
TO YOUR PROBLEM"**



Write Maskols—

VAN DYK

& COMPANY, INC.

**5 WILLIAM STREET
BELLEVILLE 9, N. J.**

MANUFACTURING CHEMISTS SINCE 1904 . . . MANUFACTURING CHEMISTS SINCE 1904 . . .

- Culpepper, G. H. 1948. Rearing and maintaining a laboratory colony of body lice on rabbits. *Amer. Jour. Trop. Med.* 28(3): 499-503.
- Eddy, G. W. 1952. Effectiveness of certain insecticides against DDT-resistant body lice in Korea. *Jour. Econ. Ent.* 45(6): 1043-51.
- Eddy, G. W., M. M. Cole, M. D. Couch, and A. Sellhime. 1955. Resistance of human body lice to insecticides. *U. S. Publ. Health Rpts.* 70(10): 1035-8.
- Eddy, G. W., M. M. Cole, and A. S. Marulli. 1954. Louse powder synergists. *Soap and Chem. Specialties.* 30(7): 121-3.
- Hayes, W. J., Jr., A. M. Mattson, J. G. Short, and R. F. Witter. 1960. Safety of malathion dusting powder for louse control. *World Health Organ. Bull.* (In press)
- Hurlbut, H. S., R. M. Altman, and C. Nibley, Jr. 1952. DDT resistance in Korean body lice. *Science* 115(2975): 11-12.
- King, W. V. 1954. Chemicals evaluated as insecticides and repellents at Orlando, Fla. U.S. Dept. Agric., Agric. Handbook 69, 397 pp.
- Nicoli, R. M., and J. Sautet. 1955. Monogr. Nat. Hyg. 8.
- Smith, C. N. 1957. A survey of insecticide resistance in body lice in South and West Africa. *WHO/Insecticides/62*, 11 pp.
- Smith, C. N., and G. W. Eddy. 1954. Techniques for rearing and handling body lice, oriental rat fleas, and cat fleas. *World Health Organ. Bull.* 10: 127-37.
- Wright, J. W., and A. W. A. Brown. 1957. Survey of possible insecticide resistance in body lice. *World Health Organ. Bull.* 16: 9-31.

★ New Kiwi Marking Ink

Kiwi Coders Corp., 4027 N. Kedzie Ave., Chicago 8, recently introduced a code dating and marking ink for use on waxed paper, aluminum foil, cellophane, and other difficult to mark surfaces. Called "Kiwi #25," the ink is reported to dry quickly after application but to remain moist on the stamp pad or inker. It is packaged in four ounce plastic bottles and larger containers and is available in all standard colors.

★ New Carbide Sales Office

Union Carbide Plastics Co., division of Union Carbide Corp., New York, recently established a sales office in the Guilford Building, Greensboro, N. C. C. S. Shoemaker, a technical representative in the South Atlantic states region since 1950, has been assigned to the new office, according to V. L. Larson, regional manager.

SHORT CHAIN
FATTY ACID

EXTENDERS

CENTURIC CD

(SINGLE DISTILLED)

CENTURY 1480

(DOUBLE DISTILLED)

and for economy

CENTURY 1475

A cost-saver in manufacturing cheaper
laundry, salt water and jelly soaps and emulsions.
Contains no rosin acid.

WRITE FOR BULLETIN OR CONSULT
CHEMICAL MATERIALS CATALOG PAGES 173-175

HARCHEM

CENTURY BRAND

HARCHEM DIVISION

WALLACE & TIERNAN, INC.
25 MAIN STREET, BELLEVILLE 9, NEW JERSEY
PLANT IN DOVER, OHIO
IN CANADA: W. C. HARDESTY CO. OF CANADA, LTD., TORONTO

your product belongs



in glass
by
Brockway

Just as a boy and his Dad go hand in hand, so do consumer acceptance and products packaged in glass. • Your product can win this coveted consumer acceptance when presented in an attractive glass container by Brockway. • Products packaged in glass have proven themselves to be the products most readily accepted on sight by the consumer. Seeing is believing . . . and when they see your product displayed in a glass container, consumer acceptance is assured. • A product that is worthy of consumer acceptance deserves a quality glass container by Brockway.



BROCKWAY GLASS

COMPANY, INC., Brockway, Pennsylvania
Sales Offices in Principal Cities

SUBSIDIARIES: Demuth Glass Works, Inc., Parkersburg, W. Va.
Tygart Valley Glass Co., Washington, Pa.

SOAP and CHEMICAL SPECIALTIES

Packaging...

AEROSOLS • LIQUIDS • PASTES • POWDERS

New "Gentle Fels" liquid detergent of Fels and Co., Philadelphia, is now being marketed in new pink linear polystyrene plastic bottles by Flex Corp. Available in 12 and 22-ounce sizes, the newly reformulated liquid detergent contains lanolin.

Automotive
Chemicals
Cleaners
Detergents
Deodorants
Disinfectants
Floor Products
Insecticides
Laundry Bleach
Metal Cleaners
Moth Products
Polishes
Shampoos
Shave Products
Soaps
Liquid Starch
Toiletries
and other
Chemical Specialties

*At market for over 28
billion packages annually*





Your challenge of the *EXCITING 60's*

—12 MILLION MORE HOUSEHOLDS!

**LET ANCHOR HOCKING EXPERIENCE BACK YOUR
BID FOR THIS NEW MARKET OPPORTUNITY!**

Population experts state that during the 1960's the number of households will increase by almost one-fourth. An immense new market!

For practically every product, packaging will be more important than ever before. And the glass package, with its appeal, convenience and protection advantages, will give your products a most desirable competitive edge. To help you make the most of the *glass package* in your bid for expanding markets, Anchor Hocking offers you the benefits of its vast experience and facilities.

Anchor Hocking experience and leadership in research and engineering can bring you tomorrow's thinking today. It results in uniform, quality-controlled glass containers and closures, scheduled, made and delivered on time. And the experience of your Anchor Man, backed by laboratory and field specialists, provides sound packaging recommendations to help keep your lines operating efficiently. Anchor Hocking Glass Corporation, Lancaster, Ohio—bringing you the extra values of *specialization* in glass packaging.

ANCHOR HOCKING

*Get set for the exciting 60's
with Anchorglass® Packaging—put
an Anchor Man on your team*



NEW FROM FULD!

**NOW YOU CAN ENJOY THE PROFIT-PACKED BENEFITS OF
PRESSURIZED-PACKAGED PRODUCTS—THANKS TO FULD
BROTHERS' QUALITY-CONTROLLED**

AEROSOL CUSTOM FILLING SERVICE!

SMALL LOT RUNS OUR SPECIALTY

Now, even if you are a *limited market* distributor, you can send your sales curve "straight up" with Fuld's aerosol custom packaging service. We handle oil and water bases, liquid and foam products of all types . . . insecticides, air fresheners, polishes, bug killers, spot cleaners, deodorants, bactericides, etc. for household, institutional, and industrial use.

Take advantage of our extensive facilities for product development, merchandising research, custom packaging and quality control.

COMPLETE SERVICE FACILITIES

• PRODUCT DEVELOPMENT

We will custom blend to your formula specifications or, package our own tested and proved products under your label—or, assist you in developing new products!

• MERCHANDISING RESEARCH

A recognized leader in aerosol packaged sanitation products, Fuld offers valuable merchandising assistance gained from its experience and continuing research.

• QUALITY CONTROL

Fuld guarantees rigid quality control on all production, regardless of the size of the run . . . the same consistent quality control that has been our policy for over 30 years.

• CUSTOM PACKAGING

A complete selection of smart new containers with built-in sales appeal. And *all*, with your private brand name prominently displayed! All service confidential.

**Your choice of Simulated Lithography or
Paper Labels**

WRITE OR PHONE FOR FULL DETAILS

FULD
BROTHERS, INC.

702 S. Wolfe St., Balto. 31, Md. • West Coast Plant: Los Angeles 13, Calif.



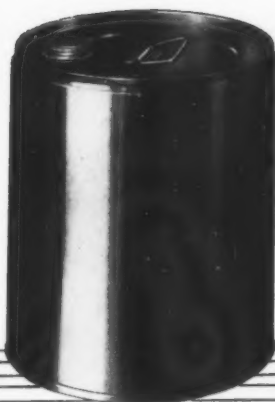
STEEL SHIPPING PAILS



If you have products that are going somewhere, send them out in Central's sturdy shipping pails, handsomely lithographed in full color in our own printing department. Send us your label or literature for a decorating suggestion.

In our big, new, ultra-modern plant, we produce a complete line of steel pails—straight side, flaring, lug cover, closed top—in a full range of sizes from 1 to 15 gallons capacity. You have your choice of all kinds of fittings and closures. We are experts on protective linings, too. And Central's specialized slip cover cans are available in sizes from 2 oz. to 20 lbs.

And remember: "Central's famous for fast service!"



*for products
going
places*



*only
mother
nature
does
a better
packaging
job*

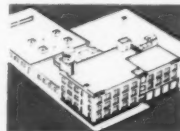


Because we have always maintained the strictest standards of quality in the industry, G. Barr & Company customers have seen *hundreds of millions* of private label aerosol packages bearing their product names, reach the hands of consumers, perfectly formulated . . . perfectly packaged. Only Mother Nature does a better job!

Today—with more than 5 acres devoted exclusively to custom formulation and filling of aerosols, you can be certain that when G. Barr & Company manufactures your aerosol product, you will receive the finest, most versatile, most efficient and economical service available. If Mother Nature doesn't do **YOUR** packaging, call on us.

G. BARR & COMPANY

PRIVATE LABEL AEROSOLS



**ACRES OF
AEROSOL
PACKAGING
FACILITIES**

General Offices: 3601 S. Racine Ave.
Chicago 9, Ill.



METRO IS FOR *dreamers*

We don't specialize in answering dreams for size 12 figures, but we do specialize in creating the glass containers of your dreams. Manufacturers of household chemicals make life easier for millions of women — and we try to do just that for all *our* customers. Envision a whole company concentrating on getting you what you want — where you want it. Envision a streamlined service where modern plants, strategically located, are geared to meet your specific production requirements. Envision the best — that's *Metromatic!*



MANUFACTURERS OF QUALITY GLASS CONTAINERS

METRO GLASS

DIVISION NATIONAL DAIRY PRODUCTS CORPORATION

GENERAL OFFICES: JERSEY CITY 3, NEW JERSEY

KP

Announcing the
compact,
economical
KP-1000
aerosol line—
300/600 per hour

COMPLETELY
AIR-OPERATED...
EXPLOSION-PROOF!

**Pack 25,000
Aerosols
a year?**

THIS NEW LINE CAN MAKE MONEY FOR YOU!

Easy to operate, compact yet complete, the semi-automatic KP-1000 comprises a piston-type filler, a crimper, and a pressure filler. Whether or not you are packaging aerosols now, or only thinking about it, you should get the facts on this economical quality equipment.

KP-Mojonnier lines have filled—and are now filling—more aerosol cans than any other make of equipment. As the most experienced specialists in aerosols, Kartridg Pak offers you a single source, with undivided responsibility, for all aerosol packaging equipment. Every unit is engineered to function with the others.

For large-volume production, Kartridg Pak automatic lines have capacities up to ten million aerosols a year.

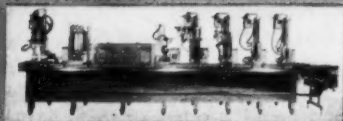
Laboratory equipment, for pre-testing your package, can be rented and the modest rental applied on the purchase.

Get all the facts fast!

To have an area sales engineer call on you promptly, telephone us at Chicago, NAional 5-8270, or write today.

THE KARTRIDG PAK CO.
Dept. 5

9151 W. Fullerton Avenue Franklin Park, Illinois



NEW "800" LINE, the automatic single straight line. Also available as double track line for larger volume. Completely engineered throughout.

PACKAGING SHOW-1960

A BEWILDERING variety of new and different ideas in packaging materials, equipment and services was served up to the 27,000 visitors to the 1960 National Packaging Exposition in Atlantic City, N.J., the week of April 4-7. According to American Management Association, which has operated 29 such shows, there were 365 companies exhibiting in 142,000 square feet in Convention Hall. Although these totals are somewhat smaller than the figures for the 1959 show in Chicago's International Amphitheatre, they should not be construed as any diminution of interest in the show or packaging.

The 1961 Packaging Show moves back to Chicago, where it will be held April 10 to 13 at the city's new Exposition Center. Since the 1963 and 1965 shows will be held in Chicago, and the '62 and '64 packaging expositions are scheduled for New York's Coliseum, it is quite likely that Atlantic City has had its last packaging show. Especially since the Auditorium at the New Jersey seaside resort is no longer adequate to contain this vast assemblage of packaging products.

The inroads plastic bottles for packaging of liquid detergents have made at the expense of metal and glass bottles were never more evident than at the packaging show. Here were displayed new

and novel shapes, colors and sizes of bottles for all leading brands of household detergents. Whether it was at the booth of Plax Corp., Owens-Illinois, American Can (Bradley-Sun Div.), Continental Can, Royal Manufacturing (Celanese Corp.), or Imco Container, the trend to polyethylene bottles was unmistakable. One of the most unforgettable displays of plastic bottles was that of Plax Corp., where a transparent plastic globe was the housing for several hundred plastic bottles, each of which was mounted on a rod emanating from the core of the globe. A Plax spokesman reported that close to 400 million of the 800 million plastic bottles turned out in 1959 were for liquid detergents. The total output should exceed one billion units this year, he reported.

New ideas for fast growing aerosol products made their appearance at the show in booths of equipment makers, a contract filler and propellant and container producers. Fluid Chemical Co., Newark, N. J., offered snacks consisting of pressure packaged cheese spreads on crackers. General Chemical Division of Allied Chemical Corp., New York, featured its usual aerosol information center at its display, where printed information on aerosols could be obtained. General also demonstrated and provided information on its recently developed quick break-

ing foam products. Details on this idea appear on page 202 of this issue. Laboratory scale aerosol pressure loading of a fragrance product was demonstrated at the booth of American Can Co., using the firm's new aluminum aerosol containers. Across the aisle from American, Crown Can employed a magician to call attention to its "piston action" pressure container for dispensing highly viscous products (peanut butter, among others) in a solid stream. A piston device is used to keep the propellant permanently separated from the product, thus prevent their mixing and eliminating any possible dilution of product during its discharge from the container.

A novel development in aerosol loading equipment was introduced by Kartridg-Pak Co., Franklin Park, Ill. A rotary tipper (see cut) that can replace four to six persons in an average filling line was displayed and demonstrated by Kartridg-Pak. The six-head unit, which can be installed in existing straight or rotary lines, automatically positions aerosol actuators. Not only can the same machine handle various types of tips, but the changeover from one tip to another can be accomplished readily, the maker says. By reducing hand labor, the cost of the unit (\$13,000) is more than made up for. The new tipper can be teamed up with Kartridg-Pak's new rotary

Some of new liquid detergent plastic bottles displayed at Packaging Show by Owens-Illinois.





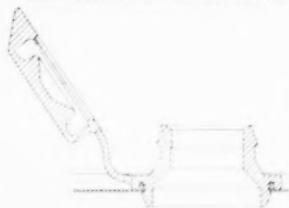
**THE CAP
THAT STAYS
ON—
EVEN WHEN
IT'S OFF!**

CONTINENTAL'S NEW ALL-PURPOSE FLIP CAP*

Continental presents new packaging beauty with economy and convenience, too... Flip Cap* can, with dripless pour spout, is perfect for practically all liquids and granulated products now packaged in round or oblong nozzle-type cans.

Continental's new plastic Flip Cap is permanently hinged to its dripless pour spout—snaps back and stays open, snaps shut and stays shut. Inserted into the top of the can *after* filling, Flip Cap permits higher filling speeds through a larger opening. And the top of the

container can be fully lithographed—no solder splashes, no flux spots or heat scorching. For the full story, ASK THE MAN FROM CONTINENTAL!



Cap can't be lost—permanently attached by a hinge. Flip Cap is available in either 1/2- or 3/4-inch opening, and in a variety of colors.



Applied after filling, Flip Cap nozzle can be inserted automatically at 200 per minute. Full lithography on top of can.

*Patents pending



Available in a wide variety of sizes and shapes



CONTINENTAL CAN COMPANY

Eastern Division: 100 E. 42nd St., New York 17
Central Division: 135 S. La Salle St., Chicago 3
Pacific Division: Russ Building, San Francisco 4
Canadian Division: 790 Bay St., Toronto 1
Cuban Office: Apartado 1709, Havana, Cuba

pressure filler, or combined with a new vacuum crimper.

New pressure packaged fruit drinks by Tropicana were displayed for the first time by Air Reduction Co., which supplied the nitrogen propellant. A grape and a cherry concentrate have been added.

An unbreakable plastic (acetal resin) container for aerosol products was introduced by Bernardin Bottle Cap Co., Evansville, Ind. Bottle is said to compare favorably in price with plastic coated glass.

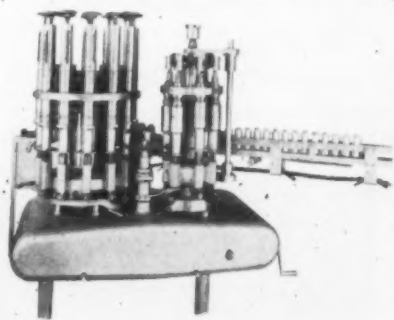
Novel case sealers were shown by Emhart Manufacturing Co., Portland, Conn. One was a compact, vertical compression sealer that delivers sealed cases to a second-floor room for take-away. The other is a new Emhart unit that can seal a case by gluing, tape or both.

Adolph Gottscho, Inc., Hillside, N.J., exhibited a new "Markomatic A" machine for coding packages on intermittent lines. Also new at Gottscho was a TMT "Markocoder" for imprinting can tops, jars, and bottles at speeds of up to 1,000 per minute.

A new gravity filler, Model EGR, was also shown by Ertel Engineering Co., Kingston, N. Y.

A new type overcap ("Spring-Grip") was introduced by J. L. Clark Manufacturing Co., Rockford, Ill. Cap features internal spring clip which grips aerosol can firmly, yet permits cap to be removed easily.

Combination rotary crimper and pressure filler (below) and new rotary tipper (right) are by Kartridg-Pak Co., Franklin Park, Ill.



Packaging Institute Aerosol Seminars

An 18-man panel of specialists will answer questions on the technology of aerosol packaging at a special seminar for professional members of the Packaging Institute, to be held June 1 at the Statler-Hilton Hotel, New York. Plans for the seminar—second in this year's series dealing with specific packaging subjects—were announced late last month by Edward G. Penn of Riegel Paper Corp., general chairman.

Attendance is open to all professional members of the Packaging Institute and to those who have submitted applications for this type of membership.

The day's registration fee is \$25, which includes luncheon.

Panel moderator will be Fred T. Pickerell of Schering Corp. The program will feature discussions by the panel of a large number of questions now being submitted in advance of the meeting.

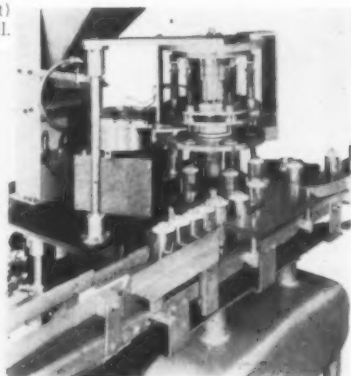
The group will discuss such questions as: What are the merits and comparative costs of the soldered metal aerosol can vs. the drawn can? What is the difference between the two-phase and three-phase propellant systems? At what point should a manufacturer consider the installation of his own aerosol filling equipment? Are the droplets that make up a true space aerosol formed in the valve or in the valve actuator? Discuss the difference between cold filling and pressure filling of propellants and

when each should be employed? Is leakage of propellant or product ever a problem during the shelf life of aerosol products?

Also, does the "net contents" statement on an aerosol refer to just product, or to both product and propellant? What is the future of aerosols in the food field? Where can a company that wants to market an aerosol product for the first time go for advice on formulations and propellants? Are aerosol propellants involved in the current FDA Food Additives discussions? Are there major restrictions in design for glass aerosols? Can a filling line be designed to both cold fill and pressure fill?

Aerosol authorities scheduled to serve on the panel are Jean W. Baer, Sprapak Chemicals, Inc.; Charles E. Beach, Stallord Pressure-Pak, Inc.; John Beacher, Avon Products, Inc.; Walter C. Beard, Risdon Manufacturing Co.; L. G. Cannella, Continental Can Co.; Victor Di Giacomo, Givaudan-Delawanna, Inc.; J. J. Gregory, Newman-Green, Inc.; A. R. Marks, Wheaton Plasti-Cote Co.; Russell McGhie, Colgate-Palmolive Co.; Dr. Francis A. Mina, Reed Carrick Co.; Ralph Minerrino, Metal Fabricating, Inc.; John J. Palmer, Peerless Tube Co.; H. E. Peterson, Peterson Filling & Packaging Co.; Joseph C. Pizzurro, Precision Valve Co.; W. M. Robertson, Owens-Illinois Glass Co.; H. R. Shepherd, Aerosol Techniques, Inc.; Ralph Thomas, Bristol-Meyers Co. and Sigmund Was, Emson Research, Inc.

Folding cartons will be the subject of the next professional seminar to be held Sept. 14 in Chicago, with Patrick A. Toensmeier of New Haven Board and Carton Co. as moderator. The fourth in the 1960 series will cover resins, and will be held Sept. 28 at the Statler-Hilton Hotel, New York, with John J. Keville of Ludlow Papers, Inc. as moderator.



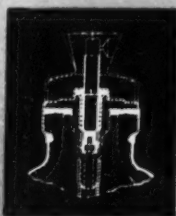
FOR
AEROSOL
DISPENSING
THE WIDEST RANGE OF
PRESSURIZED PRODUCTS

RISDON

Valves

The Risdon MAGNA-METER Valve

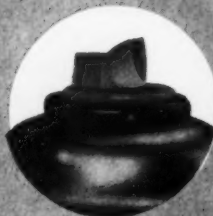
A large capacity metering valve for dispensing pre-measured amounts from fractional to multiple cc quantities in spray, liquid or foam form.



The Risdon METERED SPRAY Valve

Delivers a pre-measured spray of duration determined by packager. Actuator must be released and pressed again for subsequent measured spray.

The Risdon GB Valve
A non-metallic valve for glass, plastic and small metal containers. No spring. No metal in contact with contents. No danger of corrosion or contamination.

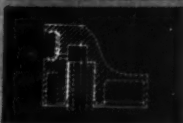


The Risdon 5210 Valve

For metal containers. One basic valve — five models with special actuator to suit specific function. Suitable for both refrigeration and pressure filling.

The Risdon MICRO-MIST Valve

Any Risdon valve becomes a "Micro-Mist" valve when fitted with Risdon's patented Micro-Mist mechanical break-up actuator. Enables valve to dispense 3-phase products or give super-spray performance on 2-phase and ultra-low pressure products. Increases formulation latitude and economy.



- Dispense an extensive variety of formulations including propellant emulsions or dispersions • certain types of powders • water-base products • 2-phase, 3-phase & ultra-low pressure products.
- Dispense products in spray, liquid or foam form.
- Applied to glass, plastic and metal containers.
- Dispense pre-measured dosages or unmeasured amounts.
- Available with special applicator-actuators to suit the product.

Contact Risdon for further information, samples and prices.

Valves shown are covered by Patents or Patents Pend.

RISDON

THE RISDON
MANUFACTURING COMPANY
Aerosol Division
Naugatuck, Conn.

RI-114

Risdon valves can be fitted with special actuator-applicators such as shown.





"Knox furnishes us clear, quality bottles," says plant manager of largest aspirin manufacturer

"Our glass bottle suppliers have to be able to meet our exacting specifications as to size, quality and color. Although breakage isn't much of a factor, we watch that closely, too," says the General Plant Manager of the world's largest producer of aspirin tablets.*

"Knox Glass has been an important supplier of bottles for us since November, 1954. We know we can count on getting the clear, absolutely colorless glass we must have when we buy from them.

"Because of increased market demand, our business is continually expanding. This underscores to us the im-

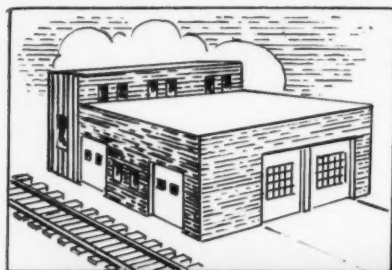
portant role that our several able glass suppliers play in our expansion.

"We are, frankly, pleased to do business with Knox. They have always been very cooperative and helpful in our dealings with them. Knox has, for example, offered the services of its engineering facilities, and while we rarely require outside assistance of this nature, it's good to know we can make use of it if we need to."

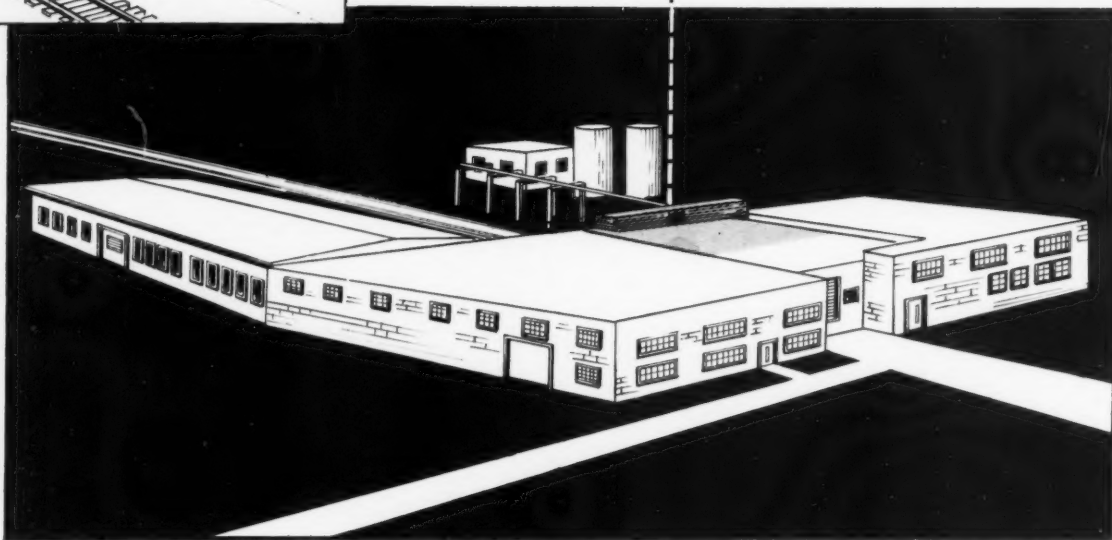
Find out how Knox Glass can meet your exacting specifications. Contact Knox Glass, Inc., Knox, Penna., or any of 37 sales offices throughout the nation.

*Name available on request.

*the new/***KNOX GLASS**



GROWTH IS IMPORTANT

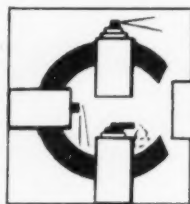


and CONTINENTAL FILLING CORPORATION Has Kept Pace with a Billion Dollar Baby

Since 1946, Continental Filling Corporation has specialized in pressure packaging. In the past 14 years, Continental Filling Corporation has kept pace with this billion dollar industry with continual plant expansion. Perfection of techniques, and the development of new procedures has

placed Continental Filling Corporation as the forerunner when it comes to something new for your pressure packaged product.

Contact Continental Filling today . . . call on 14 years of research, development and production know-how.



CONTINENTAL FILLING CORPORATION

Danville, Illinois

WHAT'S NEW?

New plastic bottles were adopted recently by Texize Chemicals, Inc., Greenville, S. C., for packaging its "Texize" liquid detergent for dishes. New containers have horizontal ribbing at shoulder designed for easier and surer handling by housewives. Depression between shoulder and heel of bottle provides hand-gripping area. Bottles, available in two sizes to hold 12 and 22 ounces of detergent, are yellow and blue. Foil label decorated in five colors, Plastic bottles and closures are supplied by Owens-Illinois Glass Co., Toledo.



New foil wrapper for "Lux" toilet soap of Lever Brothers Co., New York, is designed to provide improved shelf visibility, as well as adding glamor and giving a modern appearance. "Lux" logo has been simplified and is centered in oval bull's eye. Series of lines radiating from bull's eye in sunburst pattern is supposed to add "excitement" to new package, maker says. Brighter tones for foil wrappers are keyed to white and four different pastel-colored bars. Di Franza-Williamson Associates, New York, designed new wrapper.

Colgate-Palmolive Co., New York, has just announced introduction of "Spot Disinfectant Spray," with "Permachem" which is said to be bactericidal against staphylococcus aureus, salmonella choleraesuis and trichophyton interdigitale fungus. Pressure packaged in one-pound containers, the spray is also said to prevent mildew and to inhibit growth of bacteria and fungus on mattresses, bedding, upholstery, toilets, and bedpans. Powr-Pak, Inc., Bridgeport, Conn., loads the spray in a Continental can, fitted with all-nylon valve by Precision. Active ingredients of "Permachem" bactericide-fungicide are tributyl tin oxide, dialkyl dimethyl ammonium chloride and salicylic acid.





FACING PAGE

A liquid version of "Woolite" for cold water washing of garments made of wool and synthetic fibers has just been introduced by Woolite, Inc., New York. A nonionic detergent with a pH of seven, eight ounces of new liquid are packed in white high density polyethylene plastic bottles by Royal Manufacturing Co., Prescott, Ariz., a subsidiary of Celanese Corp.

First European aerosol packaged product using a metering valve with a mechanical break-up actuator is "Brilliantina Linetti" (right), made by Linetti Perfumes, Venice, Italy. Product is also available with standard glass bottle valve and mechanical break-up horizontal actuator, left in photo. Both "Micro-Mist" actuator and metering valve were made by Sollrene, S. p.a., Milan licensee of Risdon Manufacturing Co., Naugatuck, Conn.

Newest addition to line of pressure packaged coatings of Krylon, Inc., Norristown, Pa., is "Krylon Silicone All-Purpose Spray" in 16 and six ounce containers. Designed as lubricant, protectant and water repellent for wide range of materials, 16 ounce can retails for \$1.95; eight ounce size is 98 cents.

"Pertussin Medicated Vaporizer" of Chesebrough-Pond's, Inc., New York, designed to provide relief from congested nasal and sinus passages resulting from colds and sinus infections, is now being promoted as a hay fever medication. A special television campaign in 97 leading markets will feature the aerosol vaporizer as an aid to overcoming discomforts of hay fever, and to relieve upper respiratory congestion of sinus and summer colds.

THIS PAGE

New three-ounce size of "Noxzema Skin Lotion" of Noxzema Chemical Co., Baltimore, is being introduced at special price of 49 cents, eight cents off regular retail price of 57 cents.

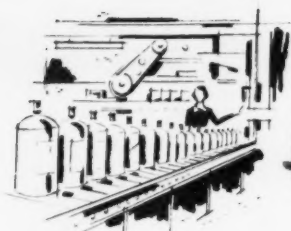
New "Beam Drain-Clene" of Beam Products, Inc., Milwaukee, is a liquid drain cleaner that maker claims is non-corrosive and non-toxic. Packed in 12-ounce, lithographed metal "Hinac" can of Continental Can Co., product retails for 69 cents. Other package sizes include one gallon (in plastic container), five gallon (in steel pail) and 55 gallon drums.

Reformulated "Prop" pre-shave lotion for electric shavers was introduced recently by Mennen Co., Morristown, N.J. Cool, blue lotion is packed in clear glass Carr-Lowery bottle resembling electric razor. Novel linear polyethylene plastic cap designed to Mennen's specifications is removed by twisting. "Prop" retails for 79 cents, plus tax.

"Bingo" drain pipe opener of Huntington Laboratories, Inc., Huntington, Ind., is now available in liquid form. Packed in plastic bottle, new product form is designed to provide greater effectiveness and handling ease.

New one-step chrome cleaner and sealer in a pressure package is now being marketed under trade name of "Chromsaver" by Restorz Products, Inc., Waterbury, Conn. Suggested retail price is \$1.50 per can.





Here's proof-by-Comparison

why more and more aerosol manufacturers are using NEWMAN-GREEN AEROSOL VALVES


You get eleven major aerosol valve advantages—four are exclusives—when you buy Newman-Green valves. No other aerosol valve in the industry has *all* these features in a single valve. Creative Newman-Green, Inc. engineering produced this simplified valve design to help you in selling more aerosol products. Give us a call today and let our engineering services and aerosol valves help you in designing and manufacturing an even better aerosol product.

ADVANTAGES		Newman-Green Inc.	Company A	Company B	Company C	Company D	Company E
1	Pressure fills fast because it does not fill through metering orifices.	✓		✓			
2	All metering orifices in spray head easily accessible for cleaning.	✓	Exclusive Newman-Green Feature				
3	360° at spraying surface—twist top.	✓	✓		✓	✓	✓
4	No small orifices drilled in metal parts.	✓	Exclusive Newman-Green Feature				
5	Can be used on metal or glass containers.	✓	✓			✓	✓
6	Curved surface on spray button reduces finger fatigue.	✓		✓		✓	✓
7	Spray heads easy to apply after pressure filling.	✓					✓
8	Delivery tubes swedged on—not slipped over—valve body.	✓	Exclusive Newman-Green Feature				
9	Excessive swelling of gasket not detrimental to operation of valve.	✓				✓	✓
10	Spray pattern can be varied completely by changing only spray head.	✓	Exclusive Newman-Green Feature				
11	No dissimilar metals used in valve parts.	✓	✓				

NEWMAN-GREEN

Creative Aerosol Valve Engineering

151 Interstate Road, Addison, Illinois



Your
business
can be
helped
by this man's
knowledge
of aerosol
markets

He is Du Pont's Ralph Crane . . . and his job is Market Research Manager of their "Freon" Products Division. From the industry's most comprehensive background of market research, his knowledge is available to help you locate marketing opportunities for your aerosol products.

Since 1947, the "Freon" Products Division has made 23 national surveys for the aerosol industry. These surveys include 17 studies of consumer knowledge, use and opinion and 6 studies of dealer practices and opinion of aerosol products. This continually growing fund of information is available to help you plan your aerosol marketing efforts.

The results of Ralph Crane's work are just one of many services available to users of Freon* propellents. The Du Pont service team includes experts in every area of aerosol planning, production and marketing. For more information call your Du Pont representative or write E. I. du Pont de Nemours & Co. (Inc.), "Freon" Products Division, 2420N- 355 Wilmington 98, Del.

FREON®
PROPELLENTS



BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

*Freon and combinations of Freon- or F- are Du Pont's registered trademarks for its fluorocarbon propellents.

PETERSON FILLS *Both...* LIQUIDS AND AEROSOLS

A
Complete
Packaging
Service
That Can Mean
Important
Freight Savings
To You...



AEROSOLS...

filled by efficient, accurate, high-speed pressure or cold-filling methods with halocarbon or hydrocarbon propellants (or a combination of both).

LIQUIDS...

filled in metal, glass or plastic in any size from 2-ounce containers to 55-gallon drums.

And when your products must be sent to common destinations in different types of packages, Peterson can do all the filling and, then, combine the various types into dollar-saving single shipments. For complete details, write, wire or phone...

PETERSON
Filling and Packaging Co.
HEGELER LANE • DANVILLE, ILLINOIS



new trade marks

THE following trade marks were published in recent issues of the *Official Gazette* of the U. S. Patent Office in compliance with section 12 (a) of the Trade Mark Act of 1946. Notice of opposition under section 13 may be filed within 30 days of publication in the *Gazette*. See rules 20.1 to 20.5. As provided by section 31 of the Act, a fee of \$25 must accompany each notice of opposition.

Morpro — This for disinfectants, pesticides, and arsenous weed killer. Filed Oct. 17, 1958 by Moore Maintenance Products, Haddonfield, N. J. Claims use since March 1958.

"Red" Emm — This for herbicides and pesticides. Filed May 11, 1959 by Monsanto Chemical Co., St. Louis, Mo. Claims use since Apr. 10, 1959.

Blue Mist — This for cleaner for glass surfaces. Filed Sept. 30, 1957 by Drackett Co., Cincinnati. Claims use since Sept. 5, 1957.

Nu-Look — This for household laundry detergent and car washing preparation, both in liquid form packaged in tins. Filed July 10, 1958 by Deltex Industries, Inc., New York. Claims use since June 13, 1958.

Lanvin — This for soap. Filed Sept. 9, 1958 by Lanvin-Parfums, Inc., New York. Claims use since September 1947.

Klenzall — This for cleaning compound for use on floors, walls, and equipment, in industrial and commercial establishments. Filed Mar. 30, 1959 by Griffith Laboratories, Inc., Chicago. Claims use prior to Feb. 11, 1943.

Klenzall — This for all purpose cleaner. Filed May 5, 1959 by Vanguard Enterprises, Inc., Grand Rapids, Mich. Claims use since June 17, 1958.

Germerase — This for detergent with disinfecting and germicidal properties for hospital floors and the like. Filed July 2, 1959 by James W. Langman, doing business as Horizon Industries, Minneapolis, Minn. Claims use since Apr. 21, 1959.

Sprinkle Magic — This for abrasive powder type of cleaning compound for chrome, metal, glass, and enamel products. Filed Mar. 4, 1959 by Mal Manufacturing Co., Akron, O. Claims use since Aug. 30, 1957.

Wheat Belt — This for artifreeze. Filed Feb. 5, 1959 by Wheat Belt Automotive Merchandising Group, Inc., doing business as Wheat Belt Buyers Distributors, Fargo, N.

Dak. Collective mark. Claims use since Sept. 16, 1957.

Promise — This for furniture wax. Filed Oct. 5, 1959 by Drop Dead Co., Pasadena, Calif. Claims use since July 20, 1959.

Varsity Acrytex — This for automobile polish. Filed Oct. 29, 1959 by The Pep Boys, Manny, Moe & Jack, doing business as Varsity Products Co., Philadelphia. Claims use since Oct. 1, 1959.

N-1 — This for insect repellent. Filed Dec. 22, 1958 by Silicote Corp., Oshkosh, Wis. Claims use since Nov. 24, 1958.

Electrolux — This for insecticides and room deodorants. Filed Jan. 5, 1958 by Electrolux Corp., New York. Claims use since Mar. 25, 1947.

Shun — This for dog repellents. Filed Mar. 30, 1959 by William Cooper & Nephews, Inc., Chicago. Claims use since April 1958.

Dianol — This for insecticide and rodenticide. Filed Apr. 10, 1959 by Mills-Pearson Corp., St. Petersburg, Fla. Claims use since Nov. 28, 1945 on insecticide.

Dixieland — This for agricultural chemical pesticides. Filed May 7, 1959 by Albary Chemical Co., Albany, Ga. Claims use since Jan. 5, 1959.

Fyte — This for disinfectant and deodorant. Filed June 2, 1959 by Hysan Products Co., Chicago. Claims use since May 18, 1959.

Oven Stick — This for cleaning preparation for ovens. Filed June 25, 1958 by William Pearson, Ltd., London, England. Claims use since Mar. 30, 1957; in commerce since May 12, 1958.

Retain — This for liquid detergent. Filed Dec. 10, 1958 by Lester C. Laufbahn, Reading, Pa. Claims use since Oct. 27, 1958.

Calgon Plus — This for synthetic all-purpose detergent in powdered or granular form for general domestic and industrial use. Filed Mar. 16, 1959 by Hagan Chemicals & Controls, Inc., Pittsburgh, Pa. Claims use since Mar. 4, 1959.

SW-51 — This for beauty bar soap. Filed Mar. 23, 1959 by Armour and Co., Chicago. Claims use since Jan. 21, 1959.

Red Robe — This for liquid detergent for general household use. Filed Aug. 7, 1959 by General Grocer Co., St. Louis, Mo. Claims use since July 29, 1959.

Rinso — This for soap and detergent for general washing and cleaning. Filed Oct. 7, 1959 by Lever Brothers Co., New York. Claims use since Oct. 3, 1917.

Hefty — This for all purpose cleaner. Filed Sept. 28, 1959 by Madison Chemical Corp., Maywood, Ill. Claims use since June 1958.

Mr. Polish — This for metal polish. Filed Oct. 12, 1959 by Sandonelle Co., Sharpville, Pa. Claims use since Sept. 16, 1959.

Algyde — This for swimming pool disinfectant. Filed July 25, 1957 by Nelson Chemicals Co., Detroit. Claims use since Apr. 23, 1957.

Harven — This for fungicide. Filed May 4, 1959 by Dow Chemical Co., Midland, Mich. Claims use since July 8, 1958.

Fence Rider — This for herbicides. Filed July 16, 1959 by Diamond Alkali Co., Cleveland. Claims use since Apr. 19, 1957.

Line Rider — This for herbicides. Filed July 16, 1959 by Diamond Alkali Co., Cleveland. Claims use since June 16, 1958.

Crop Rider — This for herbicides. Filed July 16, 1959 by Diamond Alkali Co., Cleveland. Claims use since Jan. 27, 1959.

Antrol — This for insecticides, miticides, fungicides, herbicides, and tree wound dressing. Filed July 20, 1959 by American Home Products Corp., doing business as Boyle-Midway, New York. Claims use since July 31, 1925 on insecticides.

Bronoco Klenzol — This for dry cleaning solvents. Filed Nov. 22, 1957 by R. J. Brown Co., St. Louis, Mo. Claims use since July 24, 1957.

Dab — This for plastic composition for cleaning type of typewriters, rubber stamps, adding machines, and other printing equipment, and for cleaning stamp pads. Filed Mar. 17, 1958 by Absorbene Manufacturing Co., doing business as Dab Co., St. Louis, Mo. Claims use since Feb. 17, 1958.

Dixie Pine — This for liquid household cleaner and deodorant containing bleach, pine oil, and soap. Filed Apr. 2, 1959 by Hinds Chemical Co., Jackson, Miss. Claims use since Sept. 10, 1957.

Swan — This for soap and detergent for general washing and cleaning. Filed Oct. 7, 1959 by Lever Brothers Co., New York. Claims use since January 1879.

Where Research Is the Key to Tomorrow — This for abrasives and polishing materials. Filed Dec. 5, 1958 by Minnesota Mining and Manufacturing Co., St. Paul, Minn. Claims use since Apr. 28, 1958.

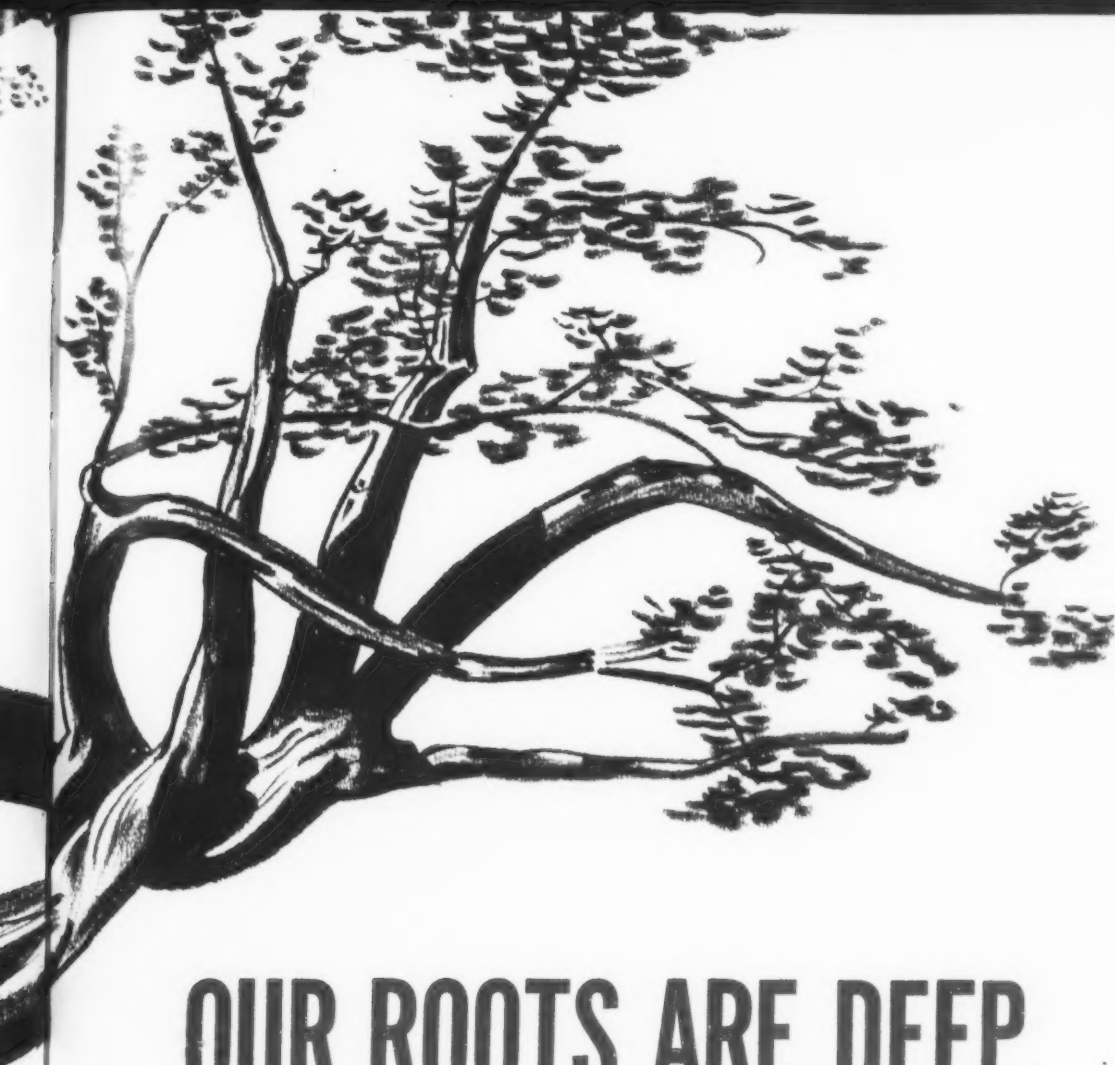
Nevr-Dull — This for metal polish, silver polish, aircraft polish, creme wax, and furniture polish and wax. Filed May 7, 1959 by George Basch Co., Freeport, N.Y. Claims use since Dec. 22, 1938.

875 — This for metal cleaner. Filed June 30, 1959 by Bar-Ray Products, Inc., Brooklyn, N.Y. Claims use since Feb. 1, 1959.

Daks Quality — This for silicone floor protective polish. Filed Oct. 19, 1959 by Damon Chemical Co., Alliance, O. Claims use since Mar. 3, 1955.

Handigrips — This for soap pads. Filed Oct. 21, 1959 by General Foods Corp., White Plains, N.Y. Claims use since on or about Sept. 29, 1959.





OUR ROOTS ARE DEEP, OUR AIM IS HIGH

but Valves don't grow on trees

Some fifteen years ago, the aerosol industry was born. Shortly after, the Precision Valve Corporation began. As the industry grew, Precision did too, in résearch, in discovery, in development.

Today, with over 500 employees and more than 60,000 square feet of manufacturing space devoted to over 10,000 different combinations of specifications for aerosol valves, Precision works with the industry to create and develop new aerosol designs to improve current procedures.

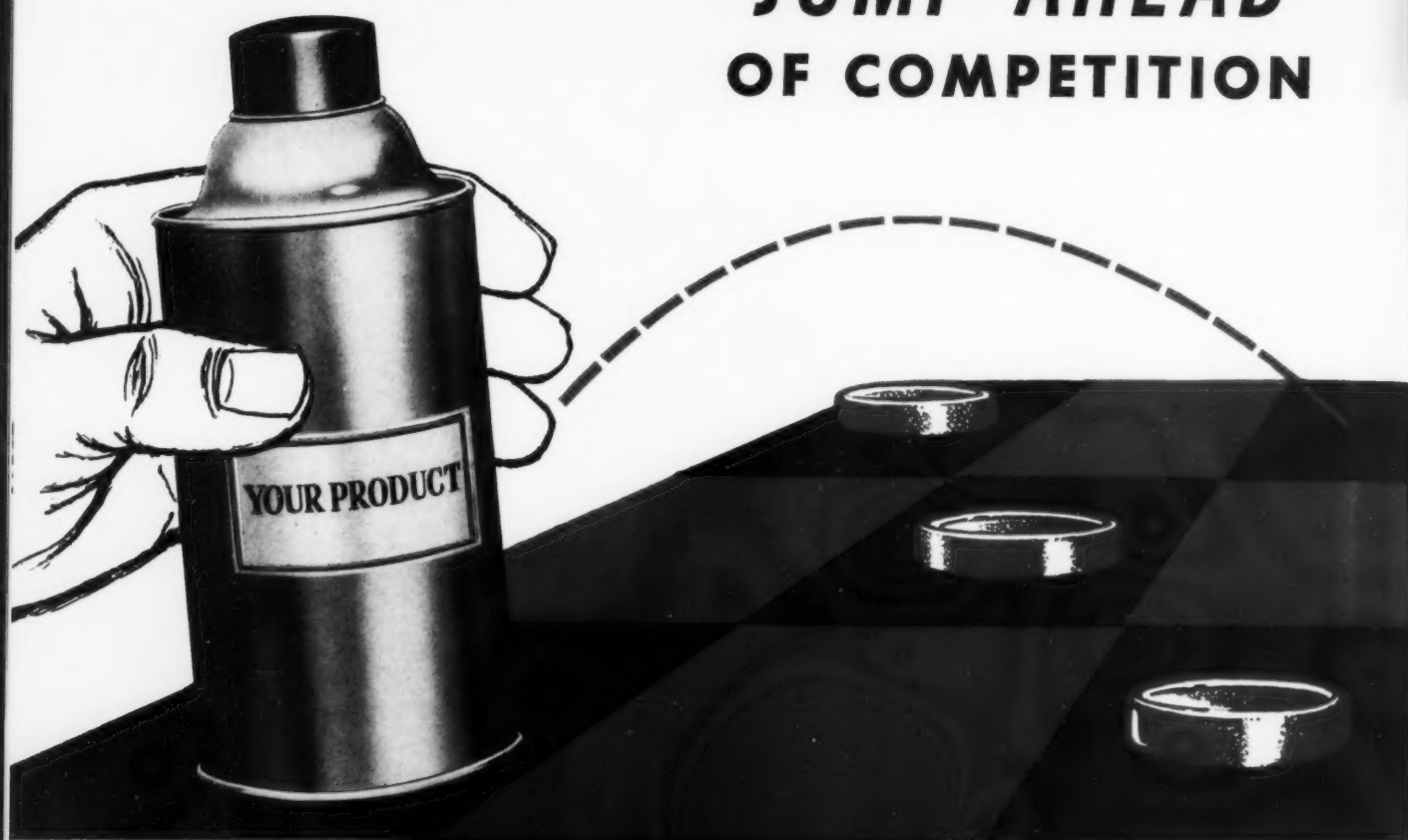
Now, on the threshold of further expansion, Precision rededicates itself to serving the aerosol industry and its customers. A major portion of Precision's new plant program will be directed toward research and development; its modern production facilities further improved; its friendly hand extended and dedicated to helping everyone.

Yes, Precision's roots are deep . . . its aim high!



PRECISION VALVE CORPORATION
700 NEPPERHAN AVENUE, YONKERS, N. Y.

JUMP AHEAD OF COMPETITION



**WITH AEROSOL
PACKAGING BY
STALFORT**



The economy of our high speed lines, (150,000 units per shift) plus tremendous warehouse space to hold the filled containers for drop shipments, has led many of the nation's leading brand names to move to Stalfort.

A completely glass enclosed all stainless line for loading food or pharmaceutical products, even powders, under sanitary conditions; is now in operation.

Your inquiries for private label packaging, in aerosol or conventional containers, for production or test runs are invited.

JOHN C. STALFORT & SONS, INC.

319 W. Pratt Street, Baltimore 1, Maryland • *Manufacturing Chemists Since 1868*

OPEN HOUSE AT OUR SUITE IN THE DRAKE HOTEL, MAY 17, DURING CSMA CONVENTION

packaging notes

Vulcan Advances Two

David W. Lynch has been appointed general sales manager and Donald R. Hoover assistant



David W. Lynch

sales manager for Vulcan-Associated Containers Companies, Birmingham, Ala., it was announced in April by Gordon D. Zuck, Vulcan president. Vulcan makes steel containers for the insecticide, chemical specialties, paint, chemical and

other related industries.

Prior to his recent appointment Mr. Lynch was sales manager—national accounts, for Vulcan



Donald R. Hoover

Steel Container Co., an associated company. He will now headquarter at the parent company's executive office.

Mr. Hoover, formerly with Vulcan Containers, Inc., will now have his office at Bellwood, Ill.

Glass Container Use Rises

Domestic shipments of glass containers for packaging household and industrial chemicals including household detergents increased by 15.1 per cent last year over 1958 from 1.5 billion units to 1.8 billion, the Glass Container Manufacturers Institute, Inc., New York, reported last month. Gains were also reported for toiletries and cosmetic bottle shipments, which rose from 1.4 billion units in 1958 to 1.5 billion last year, an increase of 7.6 per cent. Total glass container shipments in 1959 established an all-time record of 19.7 billion units, an increase of 6.5 per cent over the 18.5 billion units reported by GCMI in 1958. The Institute compiled the figures from 31 U. S. glass container manufacturers who are members of the organization and are said to represent 90 per cent of the industry.

PMMI Gift to Mich. State

A contribution of \$10,000 toward purchase of equipment for a new Michigan State University School of Packaging was announced last month by Kenneth B. Hollidge, president of the Packaging Machinery Manufacturers Institute. The contribution is part of PMMI's program for the support of education in the packaging field from funds provided by income from the institute's shows, held every two years. Mr. Hollidge serves as a member of the board of trustees of the MSU School of Packaging Foundation. He is executive vice-president of Arthur Colton Co. of Detroit.

Harry Walter, executive director of the foundation, said in accepting the contribution that it is the first gift from an association toward the \$2,000,000 building fund currently being raised. Mr. Walter is retired president of Gerrard Steel Strapping Division of U. S. Steel Corp.

Harry Walter, left, executive director of the Michigan State University School of Packaging Foundation, accepts contribution check for \$10,000 from Kenneth B. Hollidge, right, president of Packaging Machinery Manufacturers Institute. Money will be used to purchase research and development equipment for new school.



Anchor Hocking Moves

Anchor Hocking Glass Corp., Lancaster, O., moved its Pittsburgh, Pa. package division display and sales office to new and larger quarters, effective April 29. The new address is 2, Parkway Center, 875 Greentree Road, Pittsburgh, 20; telephone WALnut 2-4144.

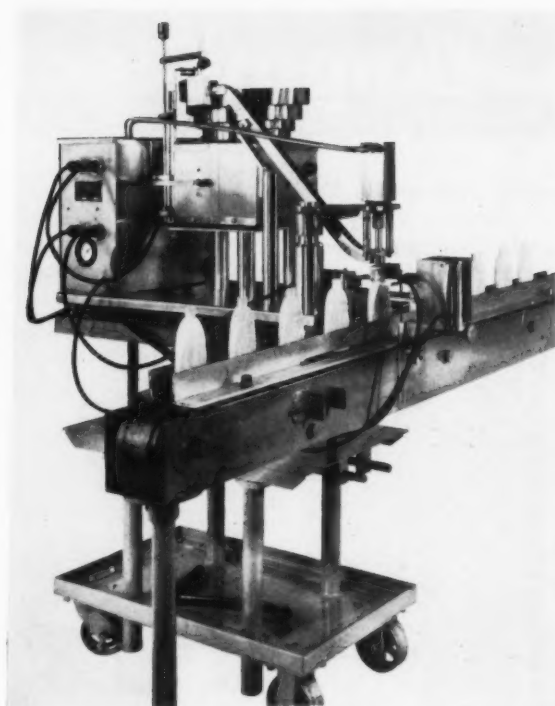
A representative display of "Anchor-glass" containers and "Anchor" metal and molded closures will be maintained at the new office, it was announced.

C. S. Horner, district sales manager in charge of the Pittsburgh territory, is assisted by W. J. Schroeder.

New Plastic Plug Inserter

Chase Equipment Corp., 47 E. 19th St., New York has announced the development of a new machine for inserting plastic plugs into bottles, affixing pressure fit caps and joining other types of fittings to containers. The machine, Model I-7, can be installed

New machine of Chase Equipment Co., New York, for inserting plastic plugs in bottles.



in a filling line in a comparatively short time and has a capacity of up to 90 containers per minute.

The new unit, according to

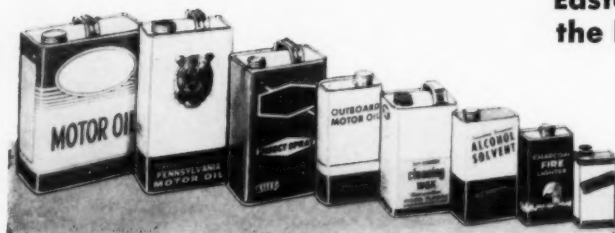
the manufacturer, has only two gross moving parts, and consists of a supply hopper and chute mount-
(Turn to Page 192)

GOOD PRODUCTS

Deserve GOOD CONTAINERS

Specify
Eastern for
the best in

DEPENDABILITY
DESIGN
DURABILITY
DECORATION
SERVICE



SIZES: 12 OZ. ROUND; and "F" STYLE ½ PINT, PINT, QUART, 40 OUNCE, ½ GALLON, U. S. GALLON, IMPERIAL GALLON, and 2 GALLON.

ROUND and SQUARE CANS IN ALL SIZES for a VARIETY of PRODUCTS



EASTERN CAN CO., INC.

31 Keap St., Brooklyn 11, N. Y.

ULster 5-0100



Ucon brand propellants put action in products



Why don't you discover Ucon Propellant service, too?

Ucon and UNION CARBIDE are registered trade marks for products of
UNION CARBIDE CHEMICALS COMPANY
 Division of Union Carbide Corporation
 30 East 42nd Street, New York 17, N. Y.

another extra base hit for SIMONIZ



*with a **VCA** valve
naturally!*



TONE, the new aerosol furniture and appliance spray with long-lasting luster, adds an "extra-base" cleaning power to the Simoniz line. To assure maximum reliability and performance, Simoniz specified VCA valves and fitments.

That's why TONE features a VCA B-9 fast-gassing valve with nylon stem and a specially constructed mechanical breakup button with stainless steel insert. Because Simoniz, like countless other aerosol manufacturers, knows the value of having VCA components in their lineup.

VCA's engineering and research have significantly contributed to the development of many aerosols that are now regarded as standard products. Whether it is the creation of a totally new concept or the improvement of an already developed product, VCA has the experience to solve your problem.

Write or phone for samples and prices. VCA will be happy to have a representative call on you to discuss your product.



VALVE CORPORATION OF AMERICA, Inc.
1720 Fairfield Ave. • Bridgeport, Conn.



Cartons for Procter & Gamble's "Ivory" shampoo won merit award in merchandising superiority in 1960 Folding Carton Competition. Award was for distinctive design. Event was sponsored by Folding Paper Box Association. Produced by Richardson Taylor-Globe Corp., Cincinnati, cartons are red, white and blue with touch of gold, feature contour of packaged bottle on front.

Winning Folding Paper Boxes

Twenty-three pound box of "All", Lever Brothers Co.'s low sudsing detergent, won merit award for general merchandising superiority at Folding Carton Competition. Merit was considered based on special conveniences built into box. Made by Packaging Corp. of America, Ohio Boxboard Division, Rittman, O., carton features tear tape and handle which is integral part of box.



A merit award for general merchandising superiority was won by cartons for "Drene" shampoo of Procter & Gamble Co. Designed by John Ziegler in various shades of pink, the packages are made by United States Printing and Lithograph Division of Diamond National Paper Corp., Cincinnati. Packages won honor at competition sponsored by Folding Paper Box Association of America.



(From Page 188)

ed on a wheeled table so that the end of the chute can be mounted over a conveyor. An electric eye actuates the machine when a container comes into position, causing an air cylinder to come forward and hold the container in position for a very brief period. During this time, an air driven plunger mounted over the end of the chute drops over the top of the container and

pushes a button or plug out of the chute into the container.

— ★ —

Vulcan Prez Named Trustee

Vern I. McCarthy, Jr., president of Vulcan Containers Inc., Bellwood, Ill., has been named to the board of trustees of the School of Packaging Foundation at Michigan State University, Lansing, it was announced late in April.

The Michigan State University School of Packaging offers the



Vern I. McCarthy, Jr.

only four accredited university level packaging courses in the United States. The Foundation was created to meet the need for technically trained experts who are also prepared for administrative work. Immediate goal of the Foundation is subscription of \$2,000,000 for the construction of the necessary facilities.

— ★ —

Dixon Container Chairman

Wesley M. Dixon, president of Container Corp of America, Chicago, was elected chairman of the board to succeed Walter P. Paepcke, who died April 13 at 63.

Mr. Paepcke founded the company in 1926, became its chairman and chief executive in 1946.

A director of the firm since 1930, Mr. Dixon serves as president of the paperboard and carton manufacturing concern, it was announced.

Leo. H. Schoenhofen, senior vice-president, was elected a director to fill the vacancy on the board created by Mr. Paepcke's death.

— ★ —

Tape-Line Folder

A new four page folder describing the Standard-Knapp Model M-10 Line system for tape-sealing new or multi-use corrugated cases was announced recently by Portland Division, Emhart Manufacturing Co., Portland, Conn. Model M-10 is designed for installation on standard types of case gluers.



NEW LOWER PRICES!

"FEATHERLITE" UNBREAKABLE BOTTLE
... 90% LIGHTER THAN GLASS
... 100% SAFER!

This amazing one-piece seamless container has taken the packaging industry by storm. The "FEATHERLITE" bottle is blow-molded of "paper-thin" unbreakable polyethylene... Scientifically designed for better and more economical packaging. And now due to a substantial increase in sales volume and production facilities we are in a position to offer both the 16 ounce and 32 ounce size at **SUBSTANTIALLY LOWER PRICES!**

- ✓ **Check these PLUS features:**
- ✓ **SAVE ON SHIPPING COSTS**
This unbelievably light container is actually 90% lighter than its equivalent in glass...tare weight is drastically reduced!
- ✓ **LOWER PACKING COSTS**
The new "Featherweight" bottle can even be used to ship highly corrosive acids in *standard corrugated cartons* (I. C. C. Approved) with less and lighter internal packing...another cost-saving factor.
- ✓ **SAFER TO SHIP AND USE**
Completely unbreakable...danger and loss because of a broken container is gone forever! Polyethylene plug insert gives double protection against leakage.
- ✓ **ADAPTABILITY**
The "Featherweight" bottle is squeezable. Simple standard components convert this unique bottle into a complete ready-to-use package that will eject a fine spray, release liquids drop by drop or dispense fluids in measured quantities. No propellents are required.

If freight costs, safety, function and appearance are of paramount importance to your profit picture, the "FEATHERLITE" bottle is for you!

Available plain or with colorful Silk Screen Labeling of your private brand name...this added service accomplished right in our plant...write for details.

32 oz. "Featherweight" Bottle as developed and adapted for bowl cleaning industry.

Exclusive T-neck Sponge Attachment fits under toilet bowl rim. Unit can be handled easily with one hand. Dispenser is controlled by gentle squeeze of bottle.

Write today for FREE sample and information.



Developed and Sold Exclusively by
NORTHWESTERN BOTTLE COMPANY
 3144 North Broadway Container Division St. Louis 7, Missouri

the answer to all
LIQUID, CREAM and FOAM
pressurized dispensing

Clayton

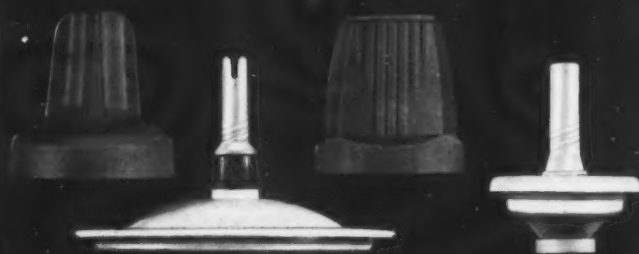
"NOZZLE DOWN"
dispensing valves and covers

TIME TESTED AND PROVED
ON HUNDREDS OF MILLIONS OF CONTAINERS

COSMETIC, PHARMACEUTICAL, PERSONAL, AUTOMOTIVE, HOUSEHOLD — OR FOOD . . . whatever your product, liquid, cream or foam . . . CLAYTON NOZZLE DOWN VALVES will dispense it more efficiently, more naturally . . . pointing the product where you want it . . . never clogging, always staying intact. Various types and designs are available with suitable flow rates and materials to meet your specific product requirements.

Superior in production, all CLAYTON VALVES assure uniform gassing . . . pressure-fill at highest speeds. No parts to assemble in your plant. Dependable in shipment . . . components can't come apart. Distinctive, patented positive-action screw covers keep your product safe.

CLAYTON NOZZLE-DOWN VALVES ARE THE MOST FAMILIAR, ACCEPTED,
PREFERRED AND CONSISTENTLY BOUGHT VALVES FOR FOAM PRODUCTS . . .
THE MOST EFFECTIVE FOR ALL CREAM AND LIQUID PRODUCTS!



ALL VALVES AVAILABLE WITH COLOR-ENAMELED MOUNTING CUPS. HIGHEST QUALITY. CHEMICAL AND CORROSION-RESISTANT INTERIOR COATINGS!

DIP TUBE VALVE

The best available! Dispenses with forward or downward push. Gasses and dispenses uniformly. Pressure fills at highest speeds. No metal valve parts exposed to product.



Clayton

CORPORATION

WRITE, PHONE OR WIRE US FOR COMPLETE DETAILS!

4205 FOREST PARK BOULEVARD • SAINT LOUIS 8, MISSOURI



**Seamless
Crown
Sprai-Tainers—
TASK-
DESIGNED
to protect
and contain
sensitive
products**



A line of sanitizing deodorant sprays for hospitals and institutions is packed in Crown Sprai-Tainers to allow sufficient pressure to propel the spray into remote corners.

Task-Designed seamless Sprai-Tainers are an exclusive Crown development. With neither side seams nor shoulder seams, the Crown Sprai-Tainer permits greater propellant pressure, protects volatile products better than any other aerosol container.

Only Crown—pioneer in the aerosol field and the

leading producer of aerosol cans—offers you both seamless and fabricated cans. And only Crown gives you the benefit of so much experience, so much research. Crown production facilities are Task-Designed to meet your needs, promptly, efficiently and accurately. Please write for more information.


CROWN

for cans • crowns • closures • machinery

CROWN CORK & SEAL CO., INC., 9300 Ashton Rd., Philadelphia 36, Pa.



And one shall be leader... business leadership isn't an honorary degree—it's earned by doing a job better than anyone else!

Chase stands at its 29th year milestone, acknowledged leader in packaging for one reason: superior research on more difficult problems in more product classes.

PRODUCTION VERSATILITY—Ample facilities to handle oil and water base, liquid and foam products, of all

types in small or large quantities. No minimum run required and no maximum limit!

INCREASED PLANT FACILITIES—Our plant is centrally located for ideal distribution, with both rail and truck facilities. We offer warehousing, drop shipping in bulk lots, direct pick-up and routing by major national truck or rail lines.

Write or Phone: **CHASE PRODUCTS COMPANY**—Maywood, Illinois

Contract fillers of **AEROSOL and PRESSURIZED PRODUCTS**

NOW! . . . out of **genetron**[®] aerosol research

A new concept in aerosols... QUICK-BREAKING FOAMS

Unique quick-breaking aerosol foams are dispensed on a limited area . . . break into liquid when disturbed! Promise important advantages for many products, including:

- After-Shave Lotions
- Nail Polish Removers
- Hair Dressings
- Sun Screen Lotions
- Cold Wave Lotions

In after-shave lotions and nail polish removers, for example, see how new Quick-Breaking Foams can be used to make application easier and more convenient . . .



Quick-breaking foam in the palm of the hand



. . . turns into liquid when applied to the face.



A dab of quick-breaking foam on the fingernail



. . . changes to liquid when touched with a cleansing tissue, and nail polish rubs off.

Out of intensive, continuing aerosol research in General Chemical's Technical Service Laboratories comes an important new development with dramatic potential for product improvement . . . *Quick-Breaking Aerosol Foams!*

These unique quick-breaking foams add new advantages, new product appeal that pays off in greater consumer acceptance. With this new principle you may overcome application deficiencies of many spray or stream-type aerosols; give them the extra touch of "magic" that bolsters sagging sales and builds repeat business.

Investigate this new research development *now*. As a first step, mail coupon for free information bulletin.



GENERAL CHEMICAL DIVISION
40 Rector Street, New York 6, N. Y.

genetron[®]

aerosol propellants

Putting the "push" in America's finest aerosols

"Genetron" Department

GENERAL CHEMICAL DIVISION

Allied Chemical Corporation
40 Rector Street, New York 6, N. Y.

Please send free "Genetron" Product Information Bulletin, "Quick-Breaking Aerosol Foam Products."

Name _____

Title _____

Company _____

Address _____

City _____ Zone _____ State _____

SCS-50

pressure packaging

Supervises 'Genetron' Sales

Thomas A. Wallace, Jr., has been appointed technical supervisor of "Genetron" propellants sales



Thomas A. Wallace, Jr.

for Allied Chemical Corp.'s General Chemical division, it was announced last month by Fred C. Hitchings, sales manager.

With General Chemical for 13 years, Mr. Wallace has worked in product development for the last 10 years. Previously he had served as heavy chemicals salesman and as research chemist.

In his new position Mr. Wallace will be directly responsible for the division's technical program for the "Genetron" line of fluorinated hydrocarbons. These compounds are used as aerosol propellants, solvents, refrigerants, power fluids and in other industrial applications.

Benjamin Wins Contest

David Benjamin, assistant to the president of Aerosol Techniques, Inc., Bridgeport, Conn., estimated within .4000ths of an inch the quantity of polypropylene film that would be required to wrap Atlantic City's Convention Hall. Conducted during the 1960 National Packaging Show of the American Management Association the contest attracted almost

3,000 entries. It was sponsored by AviSun Corp., maker of the film.

Mr. Benjamin's mathematical feat brought him a \$100 gift certificate and a \$50 slide rule.

— ★ —

Expand Distribution

The expansion of distribution for "Aeromagic Push-Button Starch" made and marketed by General Aerosols, Inc., Shelton, Conn., was announced last month by Winston H. Reed, president. The product has been test marketed in New England and upper New York state for the past six months. Five distributors have been named already and the company reports negotiations underway with brokers overseas. Premixed in an eight ounce aerosol container, the product is reported to have received excellent consumer reaction and sales.

Kartridg Pak Buys Alpha

Alpha Engineering Works, Inc., Mt. Prospect, Ill., contract engineers and designers of aerosol filling equipment, has been purchased by Kartridg Pak Co., Franklin Park, Ill., and Davenport, Ia., it was announced last month by Harold M. Mayer, Kartridg Pak president. A subsidiary of Oscar Mayer & Co., Kartridg Pak produces aerosol packaging machinery and food handling equipment.

Aerosol equipment production and contract engineering service will be coordinated between the Franklin Park and Mt. Prospect plants. Actual manufacturing will be located at Franklin Park and sales, administration, engineering, service and accounting will be centered at Mt. Prospect.

An executive committee has
(Continued on Page 200)

WRAPPING IT UP . . . For estimating most closely the quantity of polypropylene film it would take to cover Convention Hall in Atlantic City, David Benjamin, left, assistant to the president of Aerosol Techniques, Inc., Bridgeport, Conn., contract aerosol loader, receives a \$100 check and a de luxe slide rule from Marvin Fox in behalf of the contest sponsors, AviSun Corporation. The contest, conducted during the National Packaging Exposition, attracted almost 3,000 entries.



contract filling / private label guide

METERED SPRAY AEROSOL SPECIALISTS

Exclusive, specially designed equipment for fast production of all metered dispensers.

- RESEARCH** to develop the right product to make the package marketable
- QUALITY CONTROL** to make the package marketable
- PRODUCTION** to handle small and large volume of all type Aerosol products

Make it a point to talk to "AERO-CHEM" first

quality AEROSOL PACKAGING service.

AERO-CHEM fillers, inc.

1983-A State St. Ext., Phone: EDison 3-4181
BRIDGEPORT 5, CONN.

AEROSOL PACKAGING

to fit
**YOUR
PRODUCT**

• No minimum run required and no maximum limit! Rigid quality control is maintained on all production, contract filling or custom packaging.



CHASE PRODUCTS CO.

Maywood, Illinois

PETERSON

fills both

LIQUIDS AND AEROSOLS

**PETERSON FILLING and
PACKAGING COMPANY**

DANVILLE, ILLINOIS

Phone: Hickory 2-1400

IMAGINATION • CREATION • REALIZATION



**AEROSOL TECHNIQUES
INCORPORATED**

Exclusively private label manufacturer of aerosol cosmetics, pharmaceuticals and chemical specialties.

Bridgeport 5, Conn.

EDison 6-0176



**A COMPLETE
AEROSOL
SERVICE**

Product Development

- Cold or Pressure Filling
- Short and Long Runs
- Warehousing
- Marketing
- Merchandising

FOR FOOD, DRUGS, PAINTS AND CHEMICAL SPECIALTIES
GARD now offers the most complete, most modern filling facilities in the industry for all aerosols from food to paint. Minimum production runs — as low as 1,000 cans to 1,000,000 and up! Air-conditioned, humidity controlled throughout.

GARD INDUSTRIES, INC.
Northfield, Illinois

**QUALITY
& SERVICE
IN AEROSOL
CUSTOM
FILLING...**

**STALFORT
PRESSURE-PAK CORP.**

321 W. PRATT ST., BALTO. 1, MD.

SINCE 1946

**FLORIDAS' OLDEST
CONTRACT PACKAGER**

Your product can be packaged in America's fastest growing market **AT NO COST TO YOU.** The freight saved usually pays the bill.

COMPLETE FACILITIES FOR MANUFACTURING, PACKAGING, STORING, AND SHIPPING LIQUIDS, POWDERS, CREAMS.

LONG OR SHORT RUNS

AVERIL, INC.

6780 N.W. 37th Court, Miami 47, Florida

**Complete Facilities For Packing
All Types Of Aerosols**

**AEROSOL
FILLING**

**CONTRACT
&
CUSTOM**

- Paints And Inks
- Foam Products
- Sanitary Supplies
- Window Cleaner
- Insecticides
- Cosmetics

Over 100 Tested Private Label Products Available • Warehousing And Drop Shipping Available If Desired • No Minimum Run, No Maximum Run.

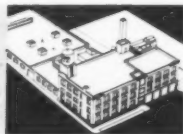


**RAYSING
Corporation**

8005 ALABAMA

ST. LOUIS, MO.

**ACRES OF
AEROSOL
PACKAGING
FACILITIES**



G. BARR & COMPANY

Highest standards of quality in the industry. Know-how gained in production of hundreds of millions of perfect packages. Creative research. Meticulous quality control. Full cooperation in formula and product development.

General
Offices:

G. BARR & COMPANY

Private Label Aerosols
3601 S. Racine Avenue
Chicago 9, Illinois

**CUSTOM COMPOUNDING
REACTING & PACKAGING**

In Large or Small Containers — Either Private Labeling or Contract Blending
Liquids, Powders or Pastes for shipment via rail, water or truck.

The only West Coast Company that can give you both reasearching, quality control, production and warehousing, with services available also in Mexico, Japan and Europe.

Eliminate freight costs, delays in shipment by having your product manufactured in one of the greatest consumer's markets in the U. S.

Please Contact Mr. Adrian

NATIONAL RESEARCH & CHEMICAL CO.
12520 Cerise Ave., Hawthorne (Los Angeles), Calif.

STROUSE, INC.

**CONTRACT FILLING
of ALL Aerosol products**

The two Strouse plants are big enough to accommodate any size contract filling job.

**BASIN & CHERRY STS.
NORRISTOWN, PA.**

Phone (Collect): BRoadway 2-2211

**Complete
AEROSOL SERVICE**

Small Runs Solicited

Insecticides, Deodorants, Tooth Paste, Shave Cream, Cosmetics, Toiletries, Household & Industrial Products, Powders, Colognes, Plastic Sprays, etc.

• Experts in formulation and development • strict quality control • ample storage • pressure and "COLD FILL" lines • samples and experimental work at no charge • special plan for companies requiring national distribution. Write or phone for details—no obligation

SUN-LAC, INC.

274 Lafayette St. • Newark 5, N. J.
Market 3-7727

PRIVATE LABEL

Contract Blending
Powders — Liquids

Your formulas or our own compounded to exact specifications. Strict quality control. Assistance from Tex-Ité specialists at no charge. Large or small quantities. Over 40 years in business. *Warehousing — Packaging — Shipping*
All inquiries strictly confidential.
Complete information—No obligation.

TEX-ITE PRODUCTS CORP.

859 E. 43rd St., Brooklyn 10, N. Y.
GE dney 4-7174

Thomasson

of PA., INC.

AEROSOL FILLING
for Private Label Marketers

Also Liquid Filling

Complete research
and laboratory facilities
Constant quality control

Norristown, Pa. BRoadway 5-4355

CALIFORNIA'S PROGRESSIVE AEROSOL FILLER

Compare our

★ PRICES

★ QUALITY

and CONFIDENTIAL SERVICE

WESTERN

FILLS ALL PRODUCTS

WESTERN FILLING CORPORATION

6423 BANDINI BLVD., LOS ANGELES

been formed charged with the coordination of the Franklin Park-Mt. Prospect activities, consisting of Mr. Mayer, George W. Heath, Kartridg Pak vice-president, and Richard B. Stanley, formerly president of Alpha Engineering. Mr. Stanley will serve as general manager of the Franklin Park-Mt. Prospect Division, while Mr. Heath has been appointed head of the new products division.

Alpha's contract engineering service will continue under the name Alpha Engineering Service,

as a division of Kartridg Pak. It will be managed by Bernard Pass.

All sales, service and manufacturing functions previously performed by Arthur Colton Co. for Alpha Engineering will now be performed by Kartridg Pak. Sales and administration offices for the aerosol equipment and contract engineering activities of Kartridg Pak will be at 800 West Central Road, Mt. Prospect, Ill. The firm's food processing equipment division at Davenport remains unaffected by the changes.



Frank J. Woods

Woods in New Allied Post

Frank J. Woods has been advanced to director of sales for General Chemical Division, Allied Chemical Corp., New York, it was announced late in April by James P. Farrell, vice-president.

Mr. Woods joined the division as an insecticide salesman in New York 22 years ago. For the past ten years he has been heavy chemical sales manager. Prior to that he served as insecticide sales manager for seven years.

— ★ —

New Loading Process

Pressure filling of an aerosol through a metered valve has become possible on a commercial scale for the first time thanks to a novel process developed by Armstrong Laboratories, West Roxbury, Mass., it was reported last month. Until now, metered aerosols had to be cold filled, which involves freezing of product ingredients. Water based systems could not be handled by this method. The newly developed process

BUILDERS PRODUCTS

manufacturer of

AEROSOL LABORATORY and PRODUCTION EQUIPMENT

- Complete Aerosol Laboratory
- Hand Operated Can Crimper
- Alpha Air Crimper
- Combination Can & Bottle Capper
- Small Production Cold Filler
- Pressure Filler
- Nitrogen Filler
- Dry Ice Cooler
- Can Piercing Pressure Determination Apparatus
- Screw on Tops
- Gauge Attachments
- Can Piercers

- Hand Pressure Testers
- Oven for Shelf Life Tests
- Hot Water Bath
- Laboratory Cold Filler & Deep Freeze
- Sampling Cylinder for Compressed Liquids
- Snow Man Dry Ice Maker
- Tank Racks
- Cabinets
- Storage Cabinets
- Stainless Sinks, Tanks, Pails, Funnels and other stainless items

BUILDERS PRODUCTS

Division of **BUILDERS SHEET METAL WORKS, Inc.**
108-110 WOOSTER ST., NEW YORK 12, N. Y. • CAnal 6-5390



will make it possible to offer a wide range of water based pharmaceuticals in aerosol form, according to John Armstrong, president of Armstrong Laboratories.

Designed and built by the firm, the new line's major components include a small metering pump for the propellant, a gasser assembly (including a pressure filling assembly) and the assembly line itself. Armstrong is currently using the line to load a topical foam preparation into 10 cc glass

SMALL PACKAGE: First successful commercial pressure filling through a metered valve of an aerosolized foam product shown below.



VOYAGE ENDED: Containers of topical foam preparation are shown emerging from pressure-filled section of newly-built assembly line of Armstrong Laboratories, Boston. After containers are loaded with foam, propellant is injected into containers through metered valves.

containers. The propellant is injected through the metered valve with what is claimed to be extreme

accuracy. Statistical methods are used to check weighings and proportioning of ingredients.

Questions about superior **CONTRACT FILLING** OF AEROSOL PRODUCTS? call Frank Strouse



President of **STROUSE, Inc.**

There's no substitute for dealing directly with "the boss," and that's the way it is at STROUSE, INC. Every job that goes through the plant is followed personally by the man who founded the company and heads it today. The two

STROUSE plants are big enough to accommodate any size contract filling job. Customers are being pleased all over the U. S. Yet at STROUSE, INC. you get the bonus of "personalized service" right from the top.

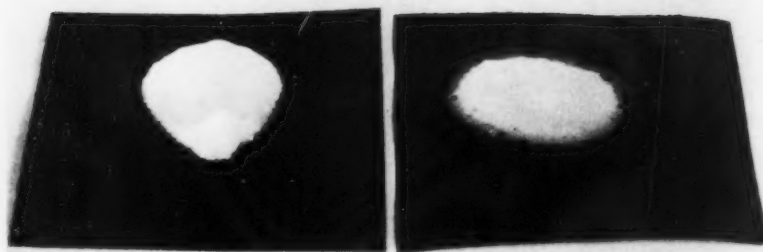
CALL — OR SEND FOR BROCHURE OF OUR FACILITIES

STROUSE, INC. Basin & Cherry Streets, Norristown, Pa.
Phone (collect, of course) BRoadway 2-2211

**STROUSE SPECIAL
ACHIEVEMENTS**

- ETHER • STARTING FLUIDS
(For Diesel and Gasoline Engines)
- PERFUMES & PHARMACEUTICALS
in metered and
unmetered tubes and bottles
- PLUS**
- ROOM DEODORANTS
- LUBRICANTS
- RUST INHIBITORS
- CLEAR ACRYLIC SPRAYS
- HAIR SPRAYS
- INSECTICIDES
- MOTH PROOFERS
- SILICONE SPRAYS

(Silk Screen Printing Available
for Cans, Bottles or Tubes)



Quick-breaking aerosol foam, developed by General Chemical Division of Allied Chemical Corp., promises to bring additional product categories into the realm of pressure packaging. Foam is confined to limited area as dispensed (left). Several seconds later it breaks into a liquid (right) when disturbed or warmed by body heat or, in this case, from high temperature of photo floodlights.

Novel Type of Pressurized Foam Formula

A "QUICK breaking foam" has been added to the range of forms in which a pressurized product may be dispensed. General Chemical Division of Allied Chemical Corp., New York, producer of "Genetron" fluorinated hydrocarbon propellants and originator of this new development, claims for it extra convenience and accuracy.

The new foam can be dispensed in small amounts on a limited area, breaks into a liquid when mechanically disturbed or warmed by body heat. For example, a small

drop of nail polish remover formulated as "quick breaking foam" can be placed on each nail. When the foam is touched with a cleansing tissue it becomes a liquid and can be rubbed to remove the polish.

Basic formulation for the new aerosol is:

	Per cent
Ethyl alcohol	46.0-66.0
Surfactant	0.5-5.0
Water	28.0-42.0
Propellant	3.0-15.0

Proportion of surfactant in

Suggested quick-breaking aerosol foam formulations have been tailored by technicians at General Chemical's technical service laboratories to produce clear concentrates for added appeal to consumers. In some cases, as in photo at left, concentrate is opaque prior to adding propellant.

In step II, as quick-breaking foam aerosol is pressure filled

with propellant, concentrate becomes colorless solution. Note propellant bubbles rising from end of the dip tube at the bottom of the bottle.

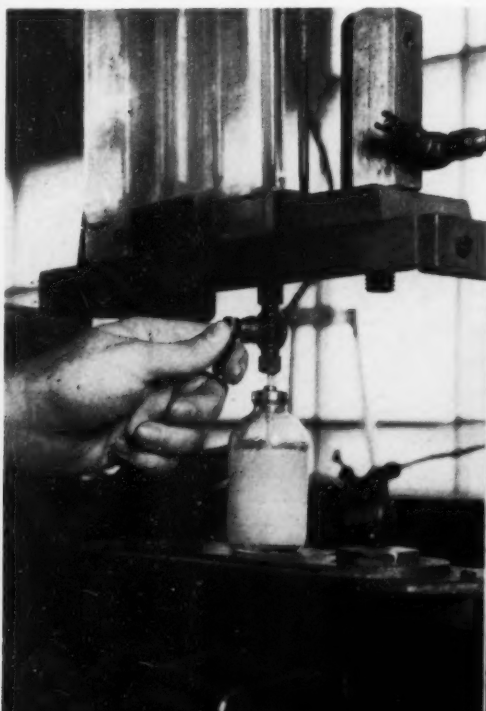
After-shave lotion is one of many applications predicted for quick-breaking aerosol foam by its developers. Pressure packaged shave lotion is applied to palm of hand as a foam

the new type foam is between one-half and one twentieth of that employed in conventional foams, such as shave creams. While surfactant may be nonionic, anionic or cationic, it should be soluble in only one of the miscible solvents (either water or alcohol), but not in both. The aerosol should be loaded while the concentrate is still hot. Candidates for packaging as fast breaking foams include after shave lotion, hair dressing, insect water, cologne, and other products for topical application, according to General Chemical. A few formulations suggested by General Chemical are given below:

After Shave Lotion (Foam Type)




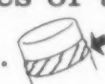
Formulation	Wt. %
Part A	
"Polawax" Surfactant (Croda)	1.50
SDA No. 40 (anhydrous)	62.10
Part B	
Menthol	0.05
Camphor	0.05
Perfume	0.30
Part C	
Emcol E-607" (Emulsol Prod.)	0.20
Allantoin (Schuykill Chem. Co.)	0.10
Water, Distilled	35.70


Warm part A (110°-120° F.) to dissolve the "Polawax"; cool to 100° F. and add part B. Heat part C to 170-180° F. to dissolve the ingredients; cool to 100° F.





Pressure Package with a Plus!

Canco "Snap-Lock"® Pressure Can... is stronger, better looking...features single-shell overcap**  that snaps snugly in place...and saves you money  because it costs less than double-shell caps.  Canco's "Snap-Lock" Pressure Can nests for easier stacking and display...more supermarket sales. \$\$\$ The "Snap-Lock" Can offers the advantages of tamper-proofing through the use of a plastic band...  important for self-service selling.

 Ask your Canco salesman to show you Canco's brand-new "Snap-Lock" Pressure Can.

CANCO *Division* **AMERICAN CAN COMPANY**

NEW YORK • CHICAGO • NEW ORLEANS • SAN FRANCISCO



*Patent applied for

**Single-shell overcaps available from a choice of manufacturers who produce caps especially designed to fit Canco's "Snap-Lock" Pressure Can.

*The People**

Behind the Seal



H. R. SHEPHERD



SAMUEL B. PRUSSIN



ETHEL F. WALSH



DAVID BENJAMIN



FRED PRESENT



VAL ROSSETTI



JAMES D. RUS



CARMELO CARRION JR.



FAY MOWERY MOORE



EARLE L. TAYLOR



PETER SGARARELLA



DAVIS PHILIPSON



PHILIP H. KLEPPE JR.



SIDNEY SOBEL

** And the most important people, of course,
are the men and women in the plant
and laboratories whose skills and day-and-night effort
make possible the product of ATI.*



AEROSOL TECHNIQUES
INCORPORATED

*Exclusively private label manufacturer of aerosol
cosmetics, pharmaceuticals and chemical specialties.*

MAIN OFFICE AND PLANT: 1730 State Street, Bridgeport 5, Connecticut
WESTERN DIVISION: 6423 Bandini Boulevard, Los Angeles 22, California

and add to solution of A and B. Fill while still warm (100° F.).

Above concentrate	92%
"Genetron" 12/114a (20:80)	8%

Hair Dressing

Formulation

Part A	Wt. %
"Polawax" (Croda)	1.50
SDA No. 40 (anhydrous)	58.00

Part B

"Ucon 50 HB-5100" (Union Carbide)	3.00
PVP/VA: E-735 (in 50% Ethanol)	2.00
Perfume	0.50
Water, Distilled	35.00

Heat part A (110-120° F.) to dissolve the "Polawax"; cool to 100° F. and add the perfume; heat part B to 100° F. and add to part A. Fill while still warm (100° F.).

Above concentrate	92%
"Genetron" 12/114a (20:80)	8%

Sun Screen Lotion

Formulation	Wt. %
"Polawax" (Croda)	1.50
SDA No. 40 (anhydrous)	60.00
Dipropylene glycol salicylate	3.00
Perfume	0.50
Water, distilled	35.00

Heat "Polawax" in alcohol to dissolve, maintain temperature at 100° F. and add the rest of the ingredients. Fill while still warm (100° F.).

Above concentrate	92%
"Genetron" 12/114a (20:80)	8%

Nail Polish Remover

Formulation	Wt. %
"Polawax"	1.50
SDA No. 40 (anhydrous)	23.00
Lauric diethanolamide	0.50
Acetone	35.00
Ethyl acetate	5.00
Water, distilled	35.00

Dissolve "Polawax" in warm alcohol and then add the rest of the ingredients. Fill concentrate while still warm.

Above concentrate	92%
"Genetron" 12/114a (40:60)	8%

Further information on "quick breaking foams" is available from General Chemical's "Genetron" Department, 40 Rector Street, New York 6, N. Y.

Screw-On Test Top

Screw-on tops for small aluminum and stainless aerosol containers using 20MM valve caps, similar to those on glass bottles, are now available from Builder's Sheet Metal Works, Inc., New York. Tops do not require capping machine. They simplify examination of product and can for corrosion after expelling propellant.

Meshberg to Europe

Aerosol manufacturers and marketers in seven European countries will be visited by Philip



Philip Meshberg

Meshberg, president of Emson Research, Inc., Bridgeport, Conn., during an extended trip scheduled to start late in May. Emson engineers and makes aerosol metering valves and special attachments for pharmaceutical and other pressure packaged specialties.

Emson is currently shipping metering valves to various European countries. Mr. Meshberg expects to complete plans for manufacture of the firm's products in Europe and to appoint agents for their distribution. He is scheduled to return late in June.

New Aerosol Overcap

West Penn Mfg. & Supply Corp., Brackenridge, Pa., recently introduced a new line of "Cover-All" metal aerosol overcaps. The new overcaps feature a single metal shell type closure which fits on the new Canco "Snap-Lock" cans. To accommodate the dimpled or notched type of can produced by other major can companies, a different type of single metal overcap is also available.

The new single metal overcap now being made by West Penn is available in decorated tin plate and features either the plain flat top stacking contour or the added valve clearance button-top. Both types of overcaps are available with

or without banding ring construction to enable the use of cellulose bands for tamper-proof protection.

Present production of both models of overcaps are for the #202 diameter size cans. According to the announcement, plans to produce a #211 size overcap are underway.

West Penn also produces a one inch mounting cup type aerosol cover, as well as metal screw caps for both glass and metal containers.

McKernan Sunbeam Rep

E. J. McKernan Co., Elgin, Ill., has been appointed as representative to handle plastic aerosol overcaps made by Sunbeam Plastics Corp., Evansville, Ind. McKernan, with an office in New York City, handles the Sunbeam line east of the Mississippi and north of the Ohio River.

Food Additives

(From Page 150)

proper use, become a part of the food. Such substances are not considered to be a food additive. However, the presence of such a substance in food may result in the food becoming adulterated and subject to seizure.

The Secretary of the Department of Health, Education and Welfare has the authority under the Act to list substances generally recognized to be safe under the conditions of their intended use. These lists are commonly referred to as the "GRAS" lists. The Secretary has already listed a number of substances which are generally recognized as safe either with limitations on the residue in food or without. These lists have been compiled as a result of the combined efforts of a large group of experts who were asked to submit recommendations to the Secretary.

If a manufacturer is producing and selling a substance which he believes may reasonably be expected to become a part of or

otherwise affect the characteristics of a food as a result of its intended use, he is then faced with the problem of how to proceed under the Food Additives Amendment. A manufacturer may, of course, decide, on the basis of experience with the use of a substance and general scientific knowledge, that the particular substance is recognized as safe. If the manufacturer is correct, the substance is not a food additive. If he guesses wrong, any food containing a residue of the substance is subject to seizure and his product will be dealt with as a food additive.

If a manufacturer believes that his product is safe but does not wish to run the risk of a disagreement with the Food and Drug Administration, he may contact Food and Drug representatives and discuss with them the status of his product. If, through experience with the use of the product and/or scientific procedures, the Food and Drug Administration agrees that the product is generally recognized as safe, the manufacturer can, by petition, request that his product be added to the "GRAS" list.

For an "incidental" additive, not recognized as safe, it will be necessary to file a petition with the Food and Drug Administration for the establishment of a tolerance for a residue of the material in processed food. It is generally advisable to discuss the petition thoroughly with Food and Drug Administration officials before filing a formal petition.

Products which have been approved for use under the Meat Inspection Act or the Poultry Products Inspection Act are not food additives for that specific use but may be a food additive for any other use.

It is the intended use of the product which is determinative of whether a substance is a food additive. In determining the intended use of the product the directions for use on the label will be an important, but not the sole factor. Any chemical specialty which is intended to be used in an estab-

lishment where it may come in contact with food, or which is a factor in preserving, dispensing, treating, packaging, or processing food, may be a food additive and should be evaluated against this law. A number of substances were granted sanctions by the Food and Drug Administration prior to the enactment of the Food Additives Amendment. These substances will not be considered food additives unless and until further action is taken by the Food and Drug Administration.

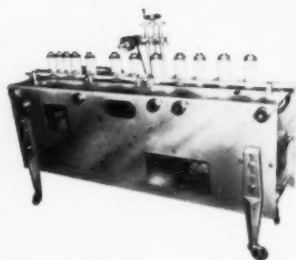
The Food and Drug Administration has indicated that substances used in restaurants for cleaning and sanitizing purposes will be generally left to the control of local public health authorities rather than being reviewed by the Food and Drug Administration for their status under the Food Additives Amendment. This does not mean that such substances may not be food additives within the meaning of the Food Additives Amendment, but for the moment,

regulation by local public health authorities will be considered adequate regulation and control.

A number of manufacturers of chemical specialty products have received requests from their customers for guarantees that their products are either exempt from or meet the requirements of the Food Additives law. The purpose of a guarantee under the Federal Food, Drug and Cosmetic Act is to relieve a person from criminal penalties for shipping adulterated or misbranded foods in interstate commerce. A guarantee, however, is generally considered ineffective for this purpose if the person receiving the guarantee processes the product in any way, including a relabeling of the product. One Federal court held that a guarantee would protect only a person who acts as a conduit through which merchandise reaches the consumer. A chemical manufacturer cannot effectively guarantee that a food containing his product will not be adulterated. A guarantee

KIWI[®]

AEROSOL CODE DATING EQUIPMENT that has earned industry acceptance



POWER DRIVEN CODER

With work table area.

For automatic code dating of concave bottoms of aerosol cans.

Will mark top, bottom, or both at same time.

Something new has been added . . .



CASE CODE DATER

with Kiwi built-in rubber band type.

- No loose type to become lost
- Ink just once per shift
- Never needs cleaning
- Inker never dries out
- Prints in the same place on every case

Also . . .

case printers for consecutive numbering
or printing information on cases

KIWI[®] CODERS CORPORATION

Dept. S.C., 4027 N. KEDZIE AVE.

CHICAGO 18, ILL.

UNIQUE
 "LIGHT-AS-A-FEATHER"
 DISPENSING
 ACTION
 HELPS PRODUCTS
 GAIN
 CUSTOMER
 ACCEPTANCE



*...and always
 in the
 right
 direction*

Every part except the dip tube is engineered and produced right in the completely equipped Schrader plant. Exceptionally easy toggle action is a typical result of Schrader's leadership in the engineering of quality pressure-handling apparatus. Schrader will design valves to dispense your product most efficiently. We will be pleased to help you from initial product analysis through mass production of the valves that actually will build customer acceptance for your product.



Schrader
 a division of SCOVILL

**Aerosol
 Valves**

Visit our
 "Hospitality Suite"
 at the
 CSMA 46th Mid-Year Convention
 May 16, 17, 18
 Drake Hotel
 Chicago, Illinois

A. SCHRADER'S SON, Division of Scovill Manufacturing Company, Inc., 470 Vanderbilt Avenue, Brooklyn 38, N. Y.



Here it is!
NEW
SUPER KING SIZE
Disposable Container

***Another TMC FIRST to help you
sell more of your products***

This NEW 10-Pound water capacity cylinder now gives you four TMC KING SIZE Disposable Containers to market your products in bigger volume... other sizes include 2, 3 and 5-pound water capacity...

**FOR WORKING PRESSURES
UP TO 240 psi - ICC APPROVED**

*WRITE, phone or wire for price information—give quantity and deliveries
required—ask for helpful Selection Guide No. DC-559*

TUBE MANIFOLD
C O R P O R A T I O N
429 BRYANT STREET • N. TONAWANDA, N. Y.

can apply only to the food additive itself or to the completely finished products. Food processors cannot avoid responsibility by obtaining guarantees from suppliers of materials used in and about food processing plants. A guarantee may refer to the fact that a substance is not a food additive when the substance is put to its intended use or that the substance has been cleared by the Food and Drug Administration in the "GRAS" list, or that the substance when used as intended will not be an unsafe food additive. The responsibility, however, is on the food processor to avoid adulteration of the food and to avoid use of an unsafe food additive.

This brief review of the application of the Food Additives Amendment to chemical specialty products cannot do more than outline the possible areas of interest to the chemical specialty manufacturer. The first step is, of course, to determine whether a product, as a result of its intended use, may reasonably be expected to become a component of or otherwise affect the characteristics of a food. This would include materials for cleaning and sanitizing food processing machinery, material for preserving components of food, material which may migrate into food from the packaging, dispensing or storing of food, substances used to lubricate and maintain the food processing machinery, and products intended for similar uses. If a negative reply can be made to this inquiry, the manufacturer has no problem with the Food Additives Amendment. But, if a positive reply can be made, the manufacturer should give immediate study to the product with the foregoing steps and considerations in mind. The Food and Drug Administration is available to help resolve problems in this field. The safest course would seem to be to contact the Food and Drug Administration whenever there is a doubt as to whether a particular product is a food additive within the definition in the Act.★★

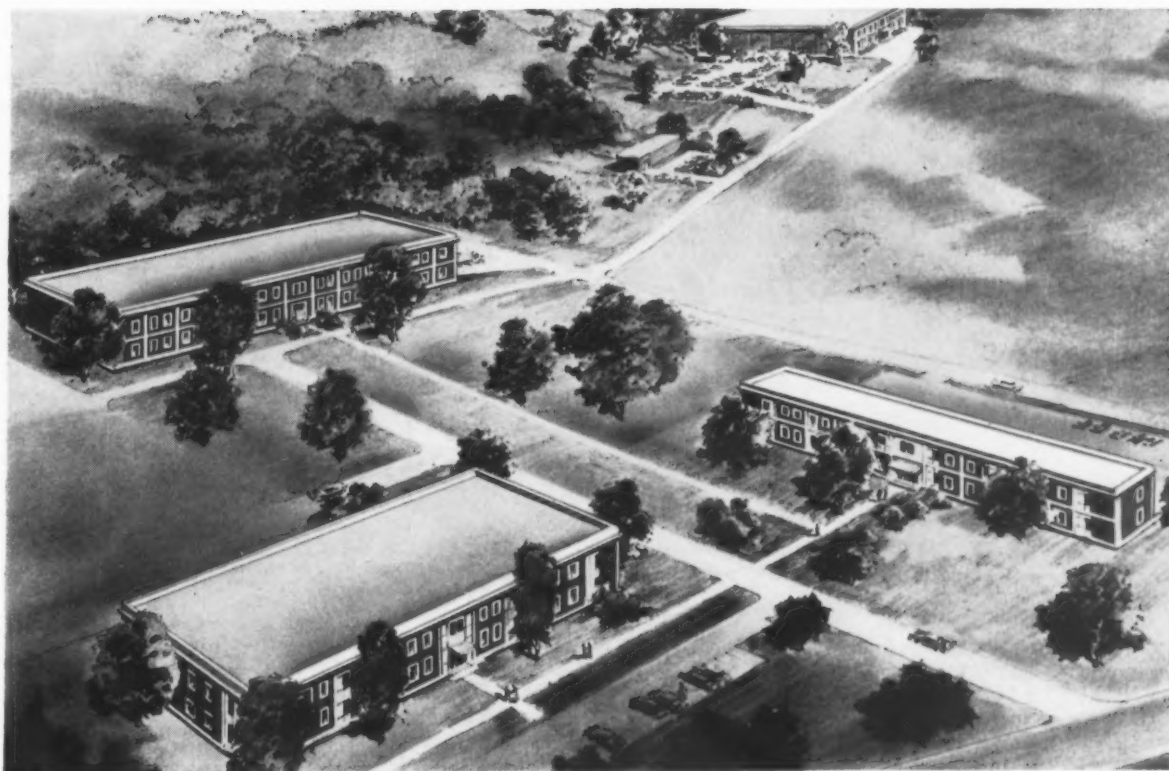
Your share in Pennsalt's new research center

On a 50-acre site near King of Prussia, Pa., this new six million dollar Technical Center is now under construction . . . a major step in Pennsalt's continuously expanding research and development program.

The first of these laboratories is projected for completion in the fall of this year, and will house the technical staff and research facilities for our ISOTRON® propellant product line.

Our goal: to offer to the aerosol industry the ultimate in equipment and technical help that will result in more and better aerosol products.

ARCHITECT'S SKETCH OF PENNSALT'S NEW TECHNICAL CENTER, KING OF PRUSSIA INDUSTRIAL PARK, SUBURBAN TO PHILADELPHIA, ON THE PENNSYLVANIA TURNPIKE.



ISOTRON propellents

The Key to Modern Living



Isotron Department 356
PENNSALT CHEMICALS CORPORATION
Three Penn Center
Philadelphia 2, Pa.

aerosol patents

No. 2,926,521. Liquid Aerosol Indicating Apparatus, patented by Franklin W. Booth, Hampton Va. The invention consists of an apparatus for determination of the mass content of liquid aerosols, which comprises an elongated expansion chamber, an aerosol source, a fitting connecting one end of said chamber to said source

and having connecting ducts therein for passage of aerosol fluids from said source to said chamber, an adjustable valve inserted in one of said ducts for regulating the supply of aerosol to said chamber, wet and dry liquid-type thermometers mounted side by side, parallel to the chamber axis within said chamber, a separator

plate interposed between said thermometers transversely of said chamber, said separator plate having attachment means for supporting said thermometers in said chamber on opposite sides of the plate, and a nozzle plate positioned transversely of said chamber at the fitting ends of said thermometers, said nozzle plate having two nozzles therein one of each of said nozzles being in line with the heat sensitive section of one of said thermometers whereby aerosol flow through said expansion chamber is passed with increased velocity toward said thermometers, said separator plate being mounted on said nozzle plate between said nozzles and extending axially in said chamber between said thermometers, whereby intermixing of the fluids on opposite sides of said plates is prevented.

No. 2,929,525. Laminated Reinforcing Coating of Glass Aerosol Containers, patented by William S. Glover and Paul A. Roush, Vineland, and Alfonse E. Budzilek, Millville, N.J., assignors to Wheaton Glass Co., Millville, N.J. Described is a container adapted to contain a product under pressure to be dispensed in aerosol form comprising a glass bottle having a discharge opening, a continuous composite sheath of elastically expandable plastic material freely overlying substantially the entire exterior surface of the bottle and secured to said surface in sealing engagement therewith only adjacent said discharge opening, said sheath including at least two superimposed layers of compatible plastic material welded at their interface to form a single laminar sheet, the material of one of said layers having greater hardness and a lower elongation factor than the material of the other said layer, said composite sheath having thickness proportioned to said pressure and being elastically expandable by said pressure when released upon explosive fracture of the bottle and when expanded having tensile and tear strengths operable within the elastic limit of said composite sheath to confine and retain said pressure and the fracture fragments of the bottle.

No. 2,910,391. Method of Applying Aerosol Detergent Fog, patented by Harry A. Toulmin, Jr., Dayton, assignor to The Commonwealth Engineering Co. of Ohio, Dayton. In a method of washing dishes using a liquid detergent packaged under pressure with a gaseous propellant, the invention covers the steps of supporting the dishes, passing hot water over the dishes to wet the dishes but not submerging the dishes in a body of water, spraying said so-packaged detergent in the form of a fog against the wet dishes, and rinsing the wet detergent-laden dishes to remove the detergent therefrom.

Introducing!

New Aerosol Metal Overcaps

By WEST PENN

Featuring

Less Expensive **OVERCAPS** Of Rigid, Durable, Gleaming Decorative Tin Plate

SINGLE Metal Shell **OVERCAPS** For The New **CANCO 'SNAP-LOCK'** Feature Cans

SINGLE Metal Shell **OVERCAPS** For Other "Dimpled" Or "Notched" Cans For Overcap Closure Requirements

SINGLE Metal Shell **OVERCAPS** With Flat Top Stacking Contour Or Added Valve Clearance "Button Top"

TAMPERPROOF Film Banding Ring Construction — Optional

DISTINCTIVE "In - House" Or Standard Color Assortment Of Plain Or Artist Designed Lithographed Decorations

SAMPLES And Quotations Of The New **"COVER-ALL"** **"OVER-CAP"** Line And Our One Inch Aerosol **"COVER-CAP"** Line—Upon Request

West Penn Mfg. & Supply Corp.

809 Second Avenue

Academy 4-5252

Brackenridge, Pa.

"A Quarter Century of Specialized Metal Closure Manufacture"



No. 2,924,360. Aerosol Dispensers and Like Pressurized Packages, patented by Arthur J. Samuel, Pittsburgh, Pa., assignor to Gulf Research Corp., Pittsburgh. The invention covers an aerosol dispenser or like pressurized package comprising a receptacle having a manually operated discharge valve at its top and an eduction passageway reaching into the angle between the side wall and bottom of the receptacle, said eduction passageway comprising an upper section extending axially of the receptacle and a lower section movable bodily in an orbital path around said upper section, a connecting member rotatably mounted on the upper section with the greater part of its mass extending to one side of its axis of rotation and carrying said lower section laterally spaced from said upper section, the laterally spaced sections being in fluid communication through an internal flow passage in the connecting member, a first inlet to the eduction passageway at the end thereof adjacent the bottom of the receptacle and a second inlet thereto adjacent the top of the receptacle, means constituting a part of the connecting member adapted to slide along a portion of said eduction passageway and guided thereby to cover said second inlet when the receptacle is upright and to uncover the same when the receptacle is inverted, whereby the contents to be dispensed will be admitted to the eduction passageway in both upright and inverted position, and whereby in in-

termediate, horizontal position the unbalanced weight of the connecting member causes it to assume a pendulous position with the end of the eduction passageway dipping into the contents at low level in the horizontally held receptacle.

No. 2,914,221. Aerosol Bomb Development, patented by Joseph F. Rosenthal, Rochester, N. Y. This invention consists of a powder cloud generator to create a charged powder particle aerosol to develop xerographic electrostatic image bearing patterns comprising a pressure resistant container, a mixture of insoluble xerographic developer powder particles in a liquid propellant positioned within said container a valve on said container to control discharge of the powder liquid mixture, a turbulent flow standard stainless steel tube metal discharge nozzle having an internal diameter of about .023 inch and a length between $4\frac{1}{2}$ and 12 inches connected to said valve, and means connected to said nozzle to pass electric current through the nozzle to heat it to a temperature of at least about 600° F.

No. 2,913,154. Aerosol Valve Assembly, patented by Clarence O. Kuffer, Niles, Ill., assignor to Aerosol Research Co., a corporation of Ill. An aerosol valve assembly is claimed comprising a mounting cup having a top wall provided with an aperture and an apertured sealing gasket po-

sitioned adjacent the underside of said top wall, a shell having an open top held against said sealing gasket, a coiled compression spring seated in said shell, a sealing cup seated in said spring, the inner wall surface of said sealing cup being tapered, the upper edge of said sealing cup being held in sealing engagement with said gasket by said spring, and a dispensing tip having a tubular valve stem extending through the apertures of said top wall and said gasket to engage said sealing cup, said valve stem being tapered below said gasket to conform to the taper of said sealing cup, said valve stem having a longitudinal metering groove in the outer surface thereof adjacent to the lower end thereof and being operable by finger pressure to displace said sealing cup from sealing engagement with said gasket.

No. 2,917,197. Reinforced Glass Aerosol Containers, patented by William S. Glover, Vineland, Joseph F. West, Millville, Paul A. Roush, Vineland, and Alfonse E. Budzilek, Millville, assignors to Wheaton Glass Co., Millville, N. J. Described is a container adapted to contain a product under pressure to be dispensed in aerosol form comprising a frangible bottle having a discharge opening, an organic adhesive bonded to exterior portions of said bottle, a continuous sheath of elastically expansible plastic

(Turn to Page 258)

2 Aerosol Production Boosters

FOR SMALL LOT AND LABORATORY WORK

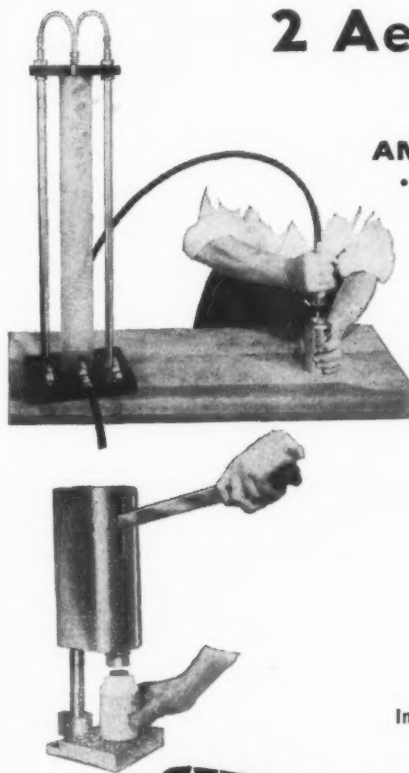
AMCO PRESSURE BURETTE

- All operating control valves conveniently located at table height on base of Pressure Burette.
- Hand operated injector valve with easily changed adapters for use with most of the popular makes of aerosol valves.
- Shatter-proof clear plastic shield that encloses Burette tube, provides maximum protection for operator.
- 1000 cc capacity.
- Compact . . . total height is 30".
- Calibrated in 5 cc graduations.
- Heavy, solid aluminum base prevents toppling.
- Available for use with nitrogen at slight extra cost.

AMCO HAND CRIMPER

- Manually operated, short stroke, and multiplied leverage lessen operator fatigue.
- Single stroke action locates can, seats valve in position, and crimps.
- Keyway guided head keeps crimper jaws centrally aligned for all can heights.
- Completely enclosed for safety . . . no moving parts exposed.
- Light, compact, durable unit weighs 16 lbs.

Immediate delivery from stock. Write for literature.



AMCO

AEROSOL MACHINERY CO.

805 MAGNOLIA AVE., WESTBURY, L. I., N. Y.



11 Ways to buy Hooker Caustic Soda

Liquid 50%	Crystal flake
Rayon grade liquid 50%	Fine flake
Liquid 73%	Powder
Rayon grade liquid 73%	Phosphated
Solid	Special alkali
Regular flake	



13 Ways to buy Nialk® Caustic Potash

Standard Grades

Liquid 45-52%
Solid 90% and 85%
Flake 90% and 85%
Granular, Walnut
Broken, Powder and
Crushed (all 90%)

Low Chloride Grades

Liquid 45-52%
Solid 85%
Flake 85%



7 Ways to buy Nialk Carbonate of Potash

Hydrate, Regular 83.5-84.0%
Calcined, Regular 99.2-99.6%
Calcined, Regular Powder—
Fine, Medium and Coarse
Powder 91-94%
Liquid 47-52%

31 ways to buy alkalies

When you have a wider range of choice of forms and grades of caustic soda, caustic potash, and carbonate of potash, you can gear your purchasing more closely with your actual process or product requirements.

Nowhere will you find a broader range than under the Hooker and Nialk brand names.

If you use two or more of these alkalies, you might also save time and money by putting them on a single

order. This saves bookkeeping too.

Why not call in your Hooker contact the next time you are considering your alkali requirements? He can be most helpful regarding all forms, grades, and shipping methods.

HOOKER CHEMICAL CORPORATION

105 Union Street, Niagara Falls, N. Y.

Sales Offices: Buffalo Chicago Detroit Los Angeles New York Niagara Falls
Philadelphia Tacoma Worcester In Canada: Hooker Chemicals Limited, N. Vancouver, B. C.



Production...

EQUIPMENT • MATERIALS • PROCESSING

"Washing Powder's Sans Spray Drying"

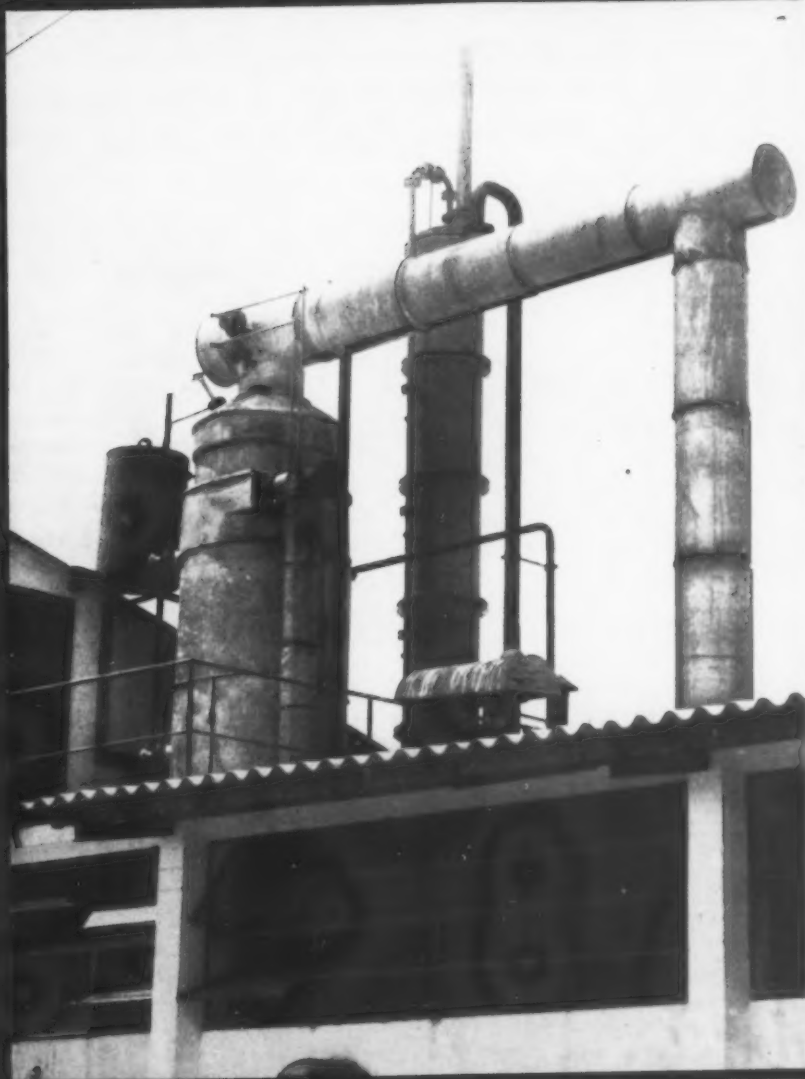
See: Plant Observer

New Patents

Ballistics and Equipment

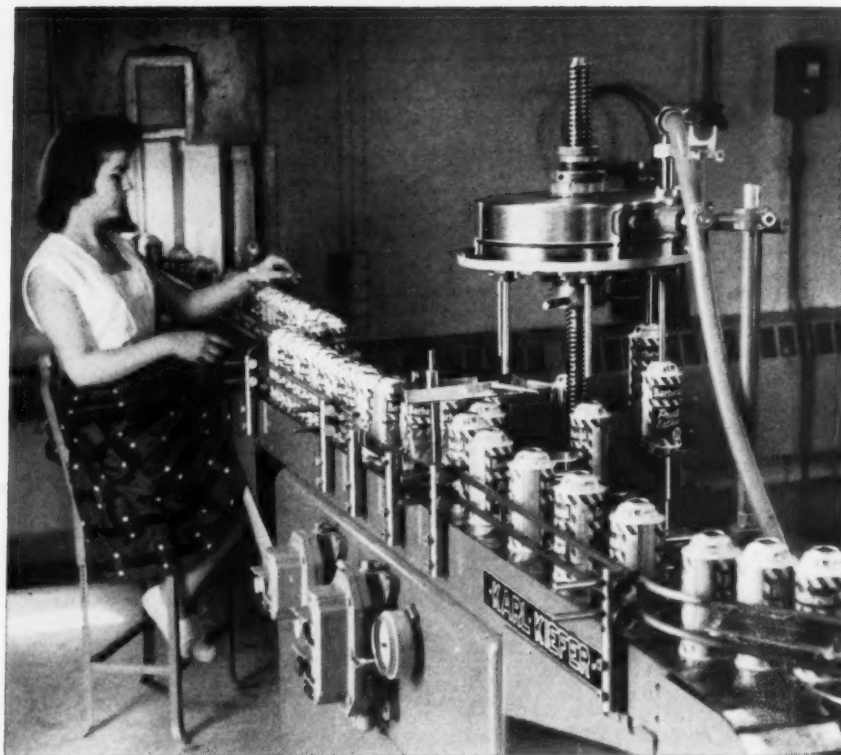
Book Reviews

Model No. 20, Plant Observer, is the only design for the "Twin" category of spray drying. It is suitable for use in a variety of spray drying systems, such as wet, dry, and wet-dry. See also p. 20.



A neat, clean,
pretty girl is
supervising the
performance
of this

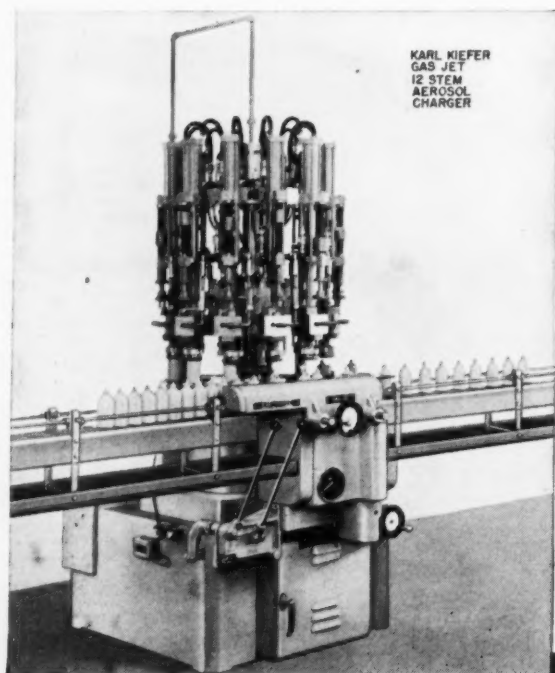
KARL KIEFER
VARI-VISCO
FILLER



Photograph, courtesy American Can Co.

It is accurately measuring BARBASOL SHAVING CREAM into AEROSOL CANS. Yes, and the young lady will look the same at the end of every day. Why? Because there is neither splash nor drip, nor stringing from this fine, dependable Kiefer equipment.

— • —



KARL KIEFER

"Gas Jet" AEROSOL CHARGERS

deliver propellant gas with deftness and precision. An installation is available in a size to meet your contemplated needs.

— • —

Kiefer also builds machines for air cleaning jars, bottles and tins.

Kiefer's new marvelous STEM invention fills liquids and flowing pastes into containers WITHOUT the use of a SEAL.

The registered name is "PIN-POINT"

The Karl Kiefer Machine Co.

923 MARTIN STREET

CINCINNATI 2, OHIO

NEW YORK • BOSTON • CHICAGO • SAN FRANCISCO • PHILADELPHIA • TORONTO
HOUSTON • VANCOUVER • SAVANNAH • LOS ANGELES • LONDON, ENGLAND

PRODUCTION section

Washing Powders Sans Spray Drying

THE emergence of modern spray dried detergents in bead form appeared at first to render other types of synthetic or soap powders obsolete. However, the very low bulk density of spray dried powders proved to be not always an asset in industrial applications, especially for use by commercial laundries.

True, the very rapid solubility of spray dried powders is a definite advantage over powders produced by simpler methods. But the extra cost involved in packaging and shipping a spray dried product frequently makes it too expensive for use in commercial laundries. Furthermore, the installation of a spray drier may not always be economically feasible for a small or medium sized soap or synthetic detergent producer.

On the other hand, the old fashioned "tennen"* process was uneconomical and cumbersome. This process involves four steps. First, the alkaline builders are incorporated into a soap and/or syndet slurry; second, the slurry is left on a concrete floor overnight to "bind-up"; in the third step it is broken up, and in the fourth ground in a powder mill.

New methods have been developed in recent years to overcome the drawbacks of the "tennen" process. In one of these the soap and/or syndet slurry is mixed with the alkaline builders in a specially designed mixer, from which the ready powder is claimed to emerge without need for further breaking and grinding.

*"Tennen" is a German word for floors. In traditional method slurry was run out on concrete floors and left to dry in ambient air. Ed.

By A. Davidsohn,
Haifa, Israel



Figure 1. Portion of sulfur trioxide plant in Dalia, Israel

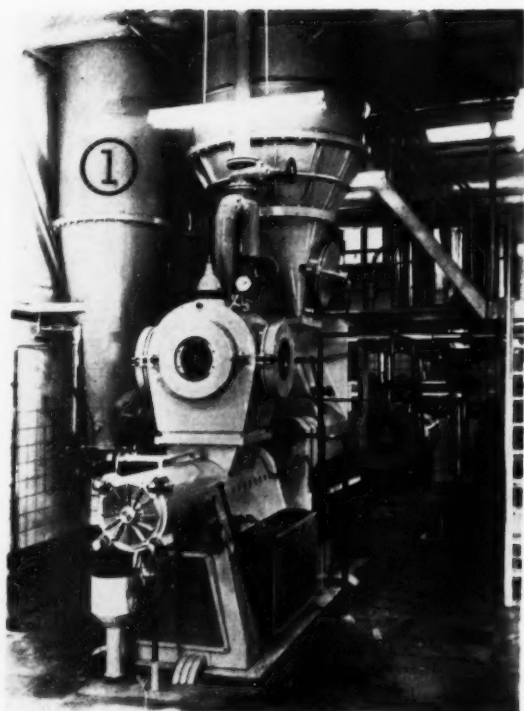
When alkylbenzenesulfonic acid became commercially available, an even simpler method was developed which permitted direct incorporation of the acid into the mixture of builders, dispensing with previous preparation of a detergent slurry. One major problem, however, is raised by use of alkyl benzene sulfonic acid made by conventional sulfonation, either with sulfuric acid or oleum: It may show discoloration on storage and pick up iron if stored in steel drums. Carried into the detergent powder, iron may cause discoloration of the textiles being processed and may act as a catalyst of oxidation processes which damage the

fiber itself. Storage and shipping of AB-sulfonic acid produced by sulfonation with sulfuric acid or oleum requires incorporation of a corrosion inhibitor or use of high priced specially coated drums.

Recent introduction of a sulfonation method using sulfur trioxide (SO_3) constitutes a new advance in the field. In the United States AB-sulfonic acids are available which are produced by sulfonation with vaporized liquid SO_3 ("Sulfan", trade name of Allied's General Chemical Division.) Since "Sulfan" cannot be imported into Israel for economic and practical reasons, another means had to be found to manufacture detergents

A simple and easy method for producing detergent, soap-detergent powder mixes for bulk packages in industry and home

G. MAZZONI, S. P. A.



VACUUM COOLER & DRIER

CONTINUOUS VACUUM PLANTS

For cooling, drying and extruding all kinds of soaps up to 84% T.F.A. Capacities range from 100 to 10,000 Kgs. per hour.

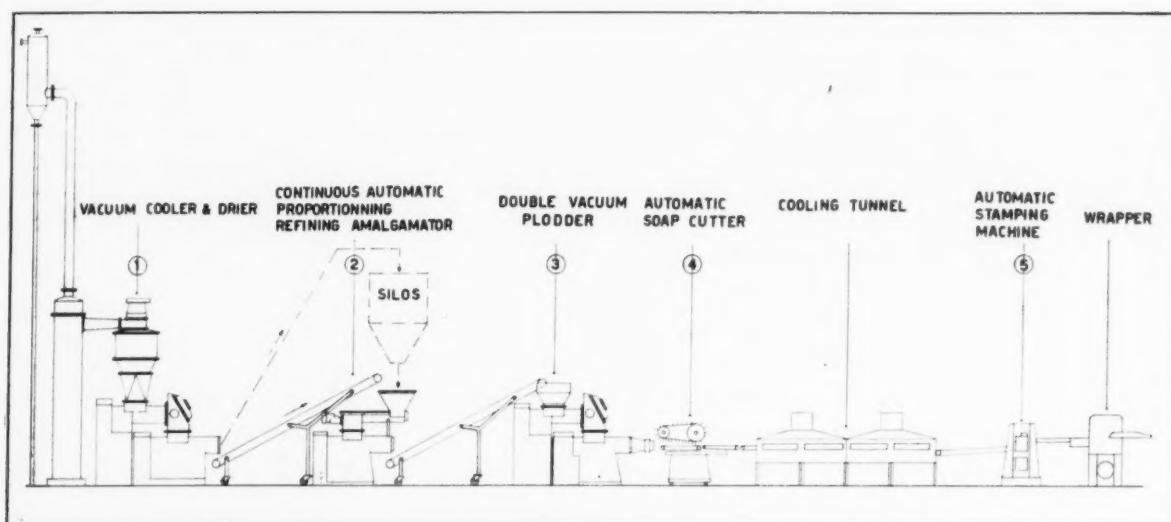
The "MAZZONI" continuous soap plants are outstanding because:

They are economical: Their requirements for steam, water and power are extremely low! Only one operator is required! No scrap soap is produced!

They perform better: 100% "Beta Phase" is guaranteed and gives extra mildness and extra foam even without coconut oil . . . no twisting or distortion!

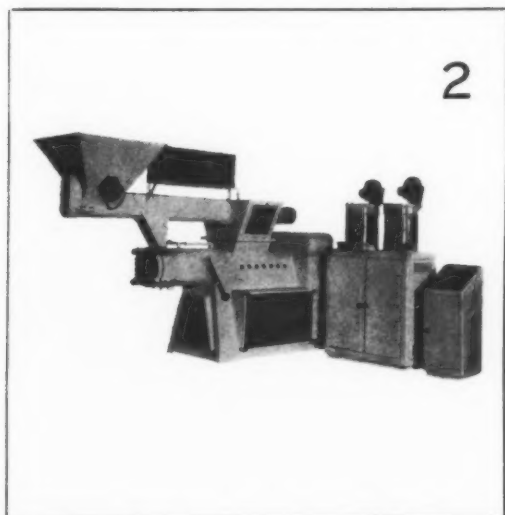
They are extremely flexible: The same plant also can manufacture pure or built household soaps, flake and powder dried base, etc. from 35 to 84% T.F.A. and more.

NEW! SPECIALLY DESIGNED LINES FOR SYNTHETIC TOILET BAR!!



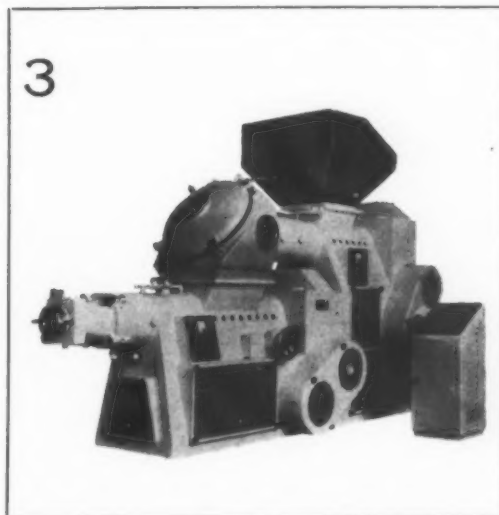
Layout of our continuous toilet soap line. Fully continuous or batch processing possible using chips silos. Our line automatically produces fully refined, first class toilet soap with no roll mills. The individual machines that are employed in the above sketch appear on this and the facing page. A complete line or individual units are available with production capacities of 250 to 1500 Kgs. per hour.

BUSTO ARSIZIO-ITALY



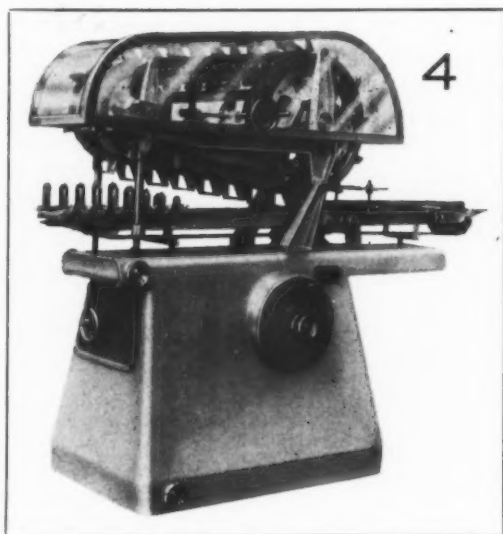
**CONTINUOUS AUTOMATIC PROPORTIONING
REFINING AMALGAMATOR**

Units shown on this page are
available individually. They



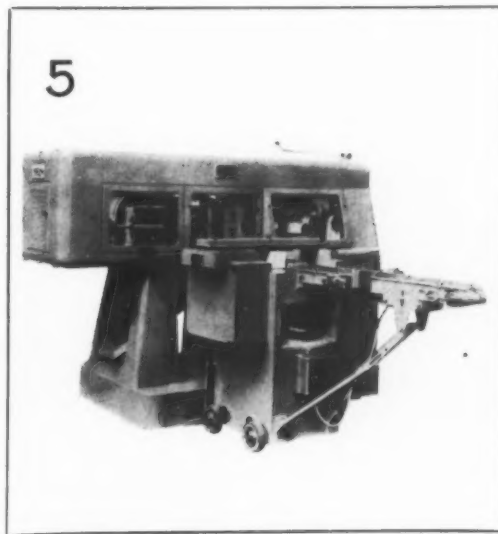
DUPLEX — DOUBLE VACUUM PLODDER
Refiner and Extruder

appear as numbered in produc-
tion line diagram on facing page.



AUTOMATIC SOAP CUTTER "TV"

Adjustable cutting length
by means of handwheel



AUTOMATIC SOAP STAMPING MACHINE

Type "St-S" stamping speed up to 125 per minute.
Type "St-D" stamping speed up to 240 per minute.
Type "St-O" for capacity molds. Stamping speed
from 100 to 200 per minute.

MORE
THAN
250
MAZZONI
PLANTS
ALL
OVER
THE
WORLD

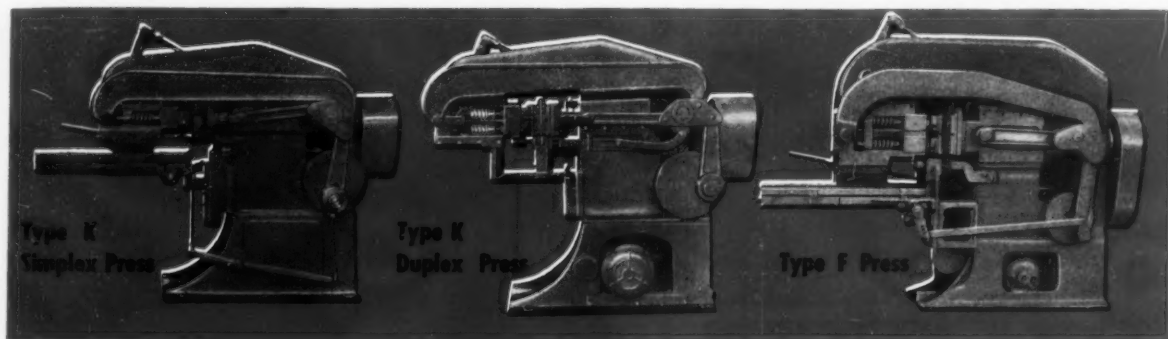
Your inquiry is welcomed! We send, without obligation, data sheets and other literature on this equipment.
Let our staff solve your manufacturing problems! We want you to get the most from your raw materials!

JONES

Automatic Soap Presses

JONES PRESSES, with their exclusive, patented *toggle motion*, have become the standard throughout the world wherever high production, high quality, and perfection of finish are paramount considerations. Standard Jones

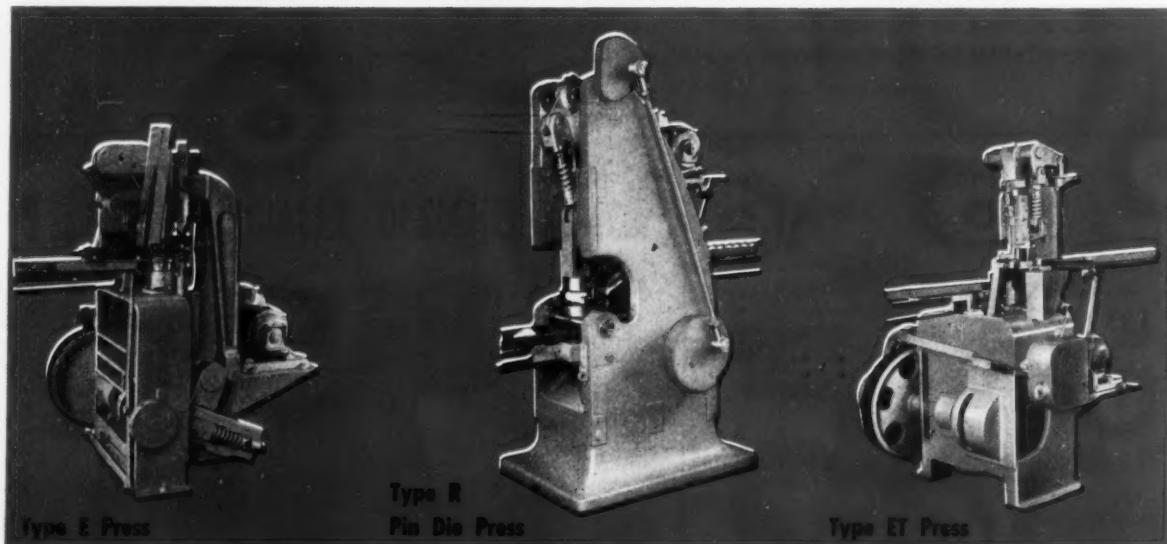
Presses illustrated here meet all soap pressing requirements. A Jones Toggle Operated Soap Press will improve the appearance of your product, increase your production, reduce your costs. Write today for complete information.



For toilet or laundry soap cakes of any shape (except highly convex cakes) with side band. Speeds of 120-140 cakes per minute.

Applications same as Type K Simplex. Presses two cakes simultaneously. Speeds up to 250 cakes per minute.

For large toilet or laundry soap cakes. Available in Simplex or Duplex Models, pressing one or two cakes per stroke.



For small toilet soap cakes (1½ oz. or less). Speeds up to 200 cakes per minute.

For toilet soap cakes of unusual shape, oval cakes, or cakes having highly convex faces, with or without side band. Speeds up to 100 cakes per minute.

For small toilet soap cakes with side band. Speeds up to 120 cakes per minute.

R. A. JONES & Co., Inc.

Cartoners — Case Packers — Soap Presses

P. O. BOX 485,
CINCINNATI, OHIO

meeting the demands of the modern consumer.

To meet this need, a process for the production of SO_3 was developed by the author. It uses a "pocket size" plant for the burning of elemental sulfur to SO_2 and subsequent oxidation to SO_3 in a small catalyst chamber. SO_3 is obtained as a gas stream correctly diluted and cooled for direct sulfonation of AB, etc. (1) Figure 1 shows part of the SO_3 plant located at Dalia, Israel.

Pure, practically sulfuric acid free AB-sulfonic acid can be produced economically by this process. A range of constants of SO_3 -sulfonated acid made by various firms in the United States and Israel is shown in Table 1.

Products within the range of specifications given in Table 1 are especially suitable for direct dry neutralization. This simply calls for adding the acid to the builders with constant mixing in conventional mixers such as strong ribbon mixers, plough mixers or the usual soap chip amalgamators. Since their free sulfuric acid content is low, these AB-sulfonic acids can be handled, stored and shipped in mild steel drums or tanks. Color deterioration is slight even on prolonged storage. It can easily be corrected by bleaching the dry powder mix of AB-sulfonic acid and builders with hypochlorite solution. This will be further illustrated in formulas given later in this paper.

When sulfuric acid or oleum sulfonated AB-sulfonic acid is added to alkaline builders heat development is pronounced and the reaction starts immediately. By contrast, with the SO_3 sulfonated AB-sulfonic acid reaction is much milder and may even have to be "triggered" by addition of water or hypochlorite solution. Once started, the reaction proceeds readily to its completion.

"Dry neutralization" of AB-sulfonic acid with fatty acids as described above can be used to obtain in one single step a finished

Table 1.	
Active AB-sulfonic acid	92- 99%
Active matter calculated as the sodium salt of AB-sulfonic acid	98-105%
Free sulfuric acid	1- 2%
Free Oil	1- 2%
Water	0- 5%
Mol. wt. of AB-sulfonic acid	320-328
Total acid value calculated as parts NaOH/100 parts AB-sulfonic acid	12.5-13.5

List of suppliers*

Continental Oil Co., Chicago
 Krystall Co., Chicago
 Pilot California Co., Santa Fe Springs, Calif.
 Treprow Products, Inc., Paterson, N. J.
 "Zohar" Detergent Factory, Kibbuz, Dalia, Israel.

*There may be other suppliers unknown to the author both in the United States and Europe.

powder combination of synthetic detergent and soap. Mixtures of soap and syndet in powder form are gaining in popularity especially for use in commercial laundries and also for home washing machines, because these products offer controlled foaming and improved detergency. A straight soap powder, even if it is formulated with phosphate builders, leads to lime soap formation when used in non-softened water which is the case in most homes. A correctly balanced combination of soap/syndet/phosphates prevents lime soap formation, has good detergency and eliminates excessive foaming during the sudsing stage.

Some compounders simply mix separately produced synthetic detergent and soap powders or add the synthetic slurry to the hot soap before mixing the combination with alkaline builders. Drying is then accomplished by the old-fashioned "tennen" or floor method. If a spray drier is available, production usually involves the following steps: Neutralization of AB-sulfonic acid and/or fatty acids (if soap is a desired component of the powder); mixing of syndet and/or soap slurry with alkaline builders and other components; and actual spraying.

Older literature and patents (2) describe processes where molten fatty acids are simply mixed with alkaline builders, mainly soda ash, to produce a washing powder.

However, experiments on a commercial scale showed saponification of only a very small percentage of fatty acids sprayed onto a considerable excess of soda ash. Methods of sampling customary in the soap plant gave rise to certain misconceptions: The soaper tests for full saponification by dissolving the sample in hot aqueous solution; clear solubility indicates full saponification. In the case of these mixtures, however, saponification was accomplished only during sampling by reaction of the fatty acids and the excess soda in the hot aqueous solution, thus giving quite misleading results.

In reality, powders made by mixing fatty acids with soda ash give off a strong rancid odor after a period of storage. This is due to oxidation of the unsaponified fatty acids. Such materials are actually liable to ignite spontaneously if fatty acids having an iodine number higher than 80 have been used. This is not surprising considering that the unsaponified acid covers the soda particles with a thin layer, exposing the powder to the effects of oxidation.

The need for a process permitting one-step neutralization of AB-sulfonic acid and fatty acids was obvious. It was found that, by premixing AB-sulfonic acid with fatty acids, complete neutralization of both could be accomplished. (Only distilled fatty acids with a maximum of 1.5 per cent

unsaponifiable plus neutral fat should be used.) The fatty acids are melted first, next heated to about 80°C. and then mixed with AB-sulfonic acid. This mixture will have the optimum temperature of about 50 to 60° C. It is added to the builders and mixed as described above in dry neutralization of AB-sulfonic acid alone. The $-SO_3H$ -group in the AB-sulfonic acid seems to activate the $-COOH$ -group in the fatty acid so that complete neutralization is achieved in one single step. Dry neutralization of fatty acids can be accomplished by this procedure even if only very small amounts of AB-sulfonic acid are added.

To make washing powders from fatty acids alone, the latter are premixed with dilute caustic soda solution. This will result in an aqueous emulsion of fatty acids in water formed *in situ* by saponification of a small percentage of the fatty acids. The soap thus formed acts as emulsifier for the

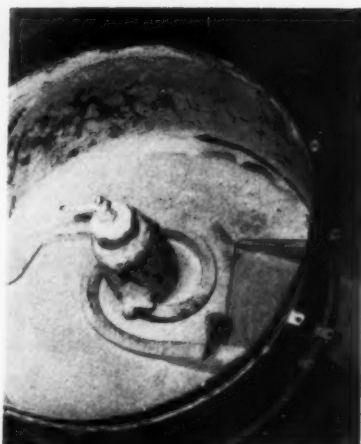


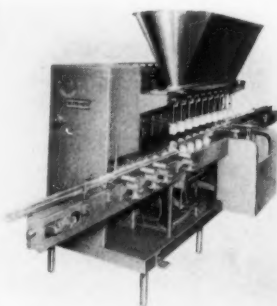
Figure 2. Close up of plough mixer working. Unit is versatile and efficient.

remaining free fatty acids. Heated to about 80 to 90° C., this emulsion is added to the builders as described above. The water present in the emulsion permits complete saponification of free fatty acids. By this method direct neutralization of soap powders up to 25 per cent f.a. is possible. The same procedure may be used to make

soap powders of higher concentrations. But it must be remembered that a paste-like mixture will result which must be left overnight to solidify and be broken and ground to powder next day.

Neutralization of AB-sulfonic acid, AB-sulfonic acid/f.a. mixtures, or f.a. alone can be speeded up by use of special equipment. This might consist of modified screw conveyors into which the component materials might be introduced continuously, then mixed, and cooled in a continuous process. If the percentage of active matter and/or fatty acids required is not too high, the product might leave this type of equipment in a form which needs no additional milling.

To speed the process of dry neutralization a screw conveyor might be modified or rebuilt to function as a heat exchanging unit. Or a system might be built up consisting of several such conveyors, the first of which might be jacketed to conserve the heat of



**WORLD'S
MOST
VERSATILE
FILLER** saves
you money
on every fill

COLTON-HOPE No. 19A HIGH SPEED AUTOMATIC fills practically anything

This basic filler with its many accessories offers the specialized performance of a custom machine because it is tailored to your exact needs, widest range of application through change-over accessories, great savings because machine and sub-assemblies are standard. Colton Volumetric precision filling saves money on every fill. Fills liquids, creams, pastes and solids in suspension into bottles, jars, cans. $\frac{3}{4}$ oz. to 32 oz. per nozzle. 4 to 14 nozzles; up to 30 cycles per min. per nozzle. Write us your requirements.

ARTHUR COLTON CO.

3468 E. Lafayette
DETROIT 7, MICHIGAN

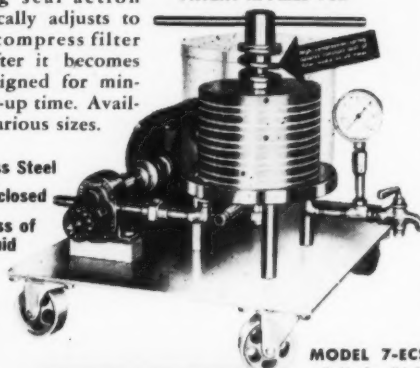
LOOK Now Constant Seal of Filter Media ...

with New Ertel Cylinder Disk Filters

• Spring seal action automatically adjusts to further compress filter media after it becomes wet. Designed for minimum set-up time. Available in various sizes.

PATENT APPLIED FOR

- ▲ Stainless Steel
- ▲ Totally Enclosed
- ▲ No Loss of Liquid



MODEL 7-ECS
Cylinder Disk

Send for Bulletin 19-S

**ERTEL
ENGINEERING CORP.**

Liquid Handling Equipment Since 1932

KINGSTON 6

NEW YORK

Branch Office & Showroom, New York, N. Y.



Figure 3. Plough mixer operating continuously. This simple and inexpensive machine can turn out 700 to 1000 kilos of powder mix per hour.

reaction. This is particularly desirable in the processing of charges consisting predominantly, or exclusively, of fatty acids. Another conveyor in such a system might be jacketed for cooling to reduce the temperature of the mixture once the neutralization process has been completed.

Automatic dosing of alkaline builders by automatic weighing machinery and the use of dosing pumps for AB-sulfonic acid and f.a. may be used to make the process fully automatic.

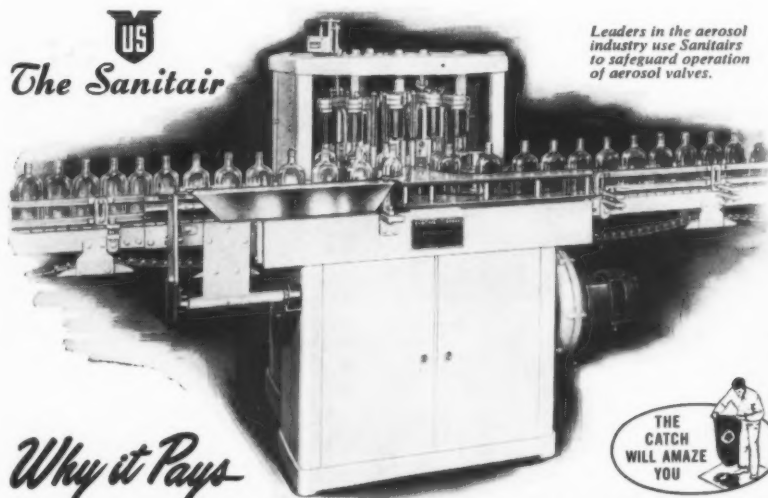
A plough mixer working continuously is shown in Figures 2 and 3. This is a simple and in-

expensive machine capable of turning out 700 to 1000 kilos of powder mix per hour; 300 to 350 kilos per batch. If speedy introduction of the ingredients and fast discharge of the mixture are provided for, this set up will be found efficient and versatile. Since it requires a minimum of equipment and labor, such an installation enables a small or medium-sized manufacturer to compete successfully in the field of laundry powders intended for commercial establishments. With the growing trend toward "giant" packages in the household field powders produced by this simple procedure may be competitive in this market also. This question however is for local market research to decide.

Some formulas for powdered products produced by dry neutralization will appear in part II of this article in the June issue of *Soap & Chemical Specialties*.

(To be concluded)

US
The Sanitair



Leaders in the aerosol industry use Sanitairs to safeguard operation of aerosol valves.

Why it Pays

TO REMOVE FOREIGN MATTER FROM NEW CONTAINERS

Packaging engineers demand it as indispensable to quality control. Merchandising managers demand clean containers for profitable consumer relations!

Air-Cleaning costs so little . . . the lack of it can cost so much. Once a Sanitair is synchronized into the production line, its operation is entirely automatic. Containers are

completely inverted, *before, during and after* the air tubes enter, assuring positive cleaning. Has automatic operating safeguards. Speed is adjustable to line operation. Container changeover for all sizes including wide-mouth finishes. Exclusive, patented features. For complete details, write for the "Sanitair Bulletin."

U. S. BOTTLE MACHINERY COMPANY
PACKAGING ENGINEERS

4019 NORTH ROCKWELL STREET, CHICAGO 18, ILLINOIS

BOSTON - NEW YORK - PHILADELPHIA - LOS ANGELES - SAN FRANCISCO - SEATTLE - DENVER - PORTLAND, ORE. - KANSAS CITY
TUSCON - JACKSON, MISS. - ATLANTA - MONTREAL - TORONTO - VANCOUVER - WINNIPEG - SANTIAGO - SAO PAULO - HONOLULU

The E-Z Air Cleaner

for semi-automatic air cleaning of new containers of any size or type. Containers are manually inverted over air valves, two at a time, up to 40 per minute. Write for the "E-Z Bulletin."



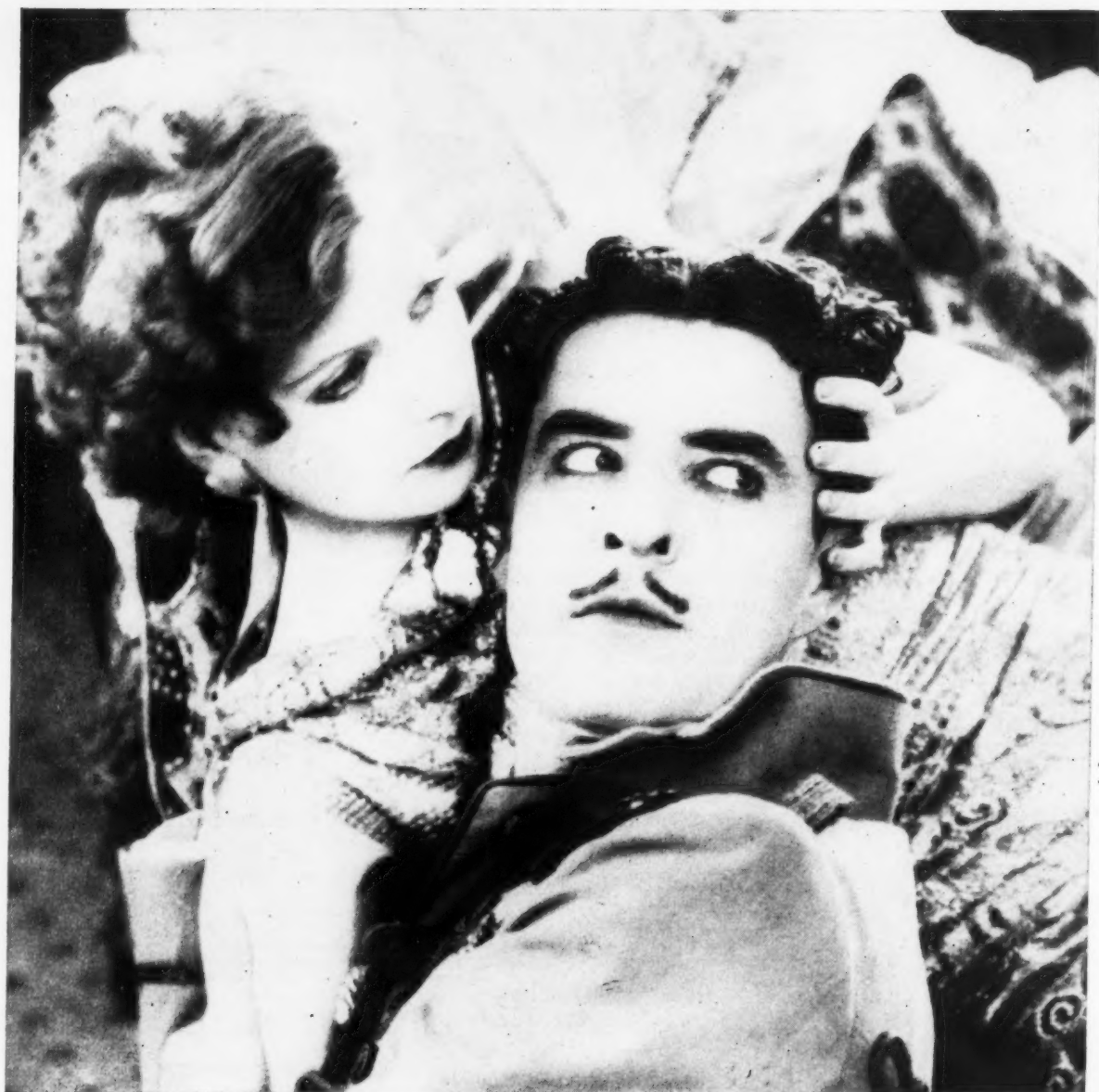
For rinsing bottles or jars, ounces to gallons as illustrated. Rinses both inside and outside with water or steam. Write for the "Rotary Rinser Bulletin."



To Feed Containers Faster



THE U. S. CONTAINER FEEDER feeds containers to the packaging line faster, easier, at a steadier pace and a lot cheaper! Just dump 'em on, and let the feeder take charge. Pays for itself quickly and reduces costs permanently. Write for a "Container Feeder Bulletin."



*From DID ANYONE BRING AN OPENER?, by permission of
Harper & Brothers and Scott Meredith Literary Agency, Inc.*

*"Tell me, do you always specify
Victor Sodium Phosphates?"*

It's not just sweet talk. Smart buyers know from experience there's much to be gained when they specify Victor chemicals. For one thing, Victor offers a complete selection of sodium phosphates: hemi, mono, di, tri, tetra, tripoly, acid pyro, and chlorinated T.S.P. They know, too, Victor makes fast delivery of these top quality chemicals from five different locations and many additional warehouse points. Whether you're interested in savings from bulk shipments or economies from mixed truckloads of sodium phosphates, you'll find, "It pays to see Victor."

Victor Chemical Works, Division of Stauffer Chemical Company, Dept. SC5, 155 N. Wacker Drive, Chicago 6.

soap plant observer

By Willis J. Beach

Technical Service Department,
Sugar Beet Products Co.

AN increasing number of technical papers bring statistics to bear on the evaluation of detergents and a wide range of other chemical specialties. Use of statistics in the design and control of laboratory studies and the importance of selecting the appropriate statistical tool for individual jobs are underlined in an article by David Justice of Lever Brothers Co. which appeared in March and April *Soap and Chemical Specialties*. Dr. Justice's subject was the evaluation of new household cleansers.

The need for an understanding and intelligent application of statistics in the detergent and chemical specialties fields is obvious. The wide variety of soils, substrates and detergents makes it imperative that the problem of evaluation be tackled in an orderly and systematic fashion.

In introducing the need for statistical methods in the detergent laboratory, at a symposium on the subject in 1952, Jay C. Harris, Chairman of the ASTM Committee D-12 on Soaps and Other Detergents said, "What is needed is knowledge of the reproducibility and significance of these methods and especially their correlation with practice Any tool which will speed production, aid in uniformity of product or increase the knowledge of some chosen subject is a useful one to borrow".

Yes, we may use this tool but the borrowing must not be on a superficial basis. The laboratory worker, the process control engineer and those responsible for quality control should endeavor to take



a course in the basic concepts and mechanics of statistics so that they will have the necessary backdrop for the intelligent application of statistical methods to their work. For the beginner, such courses are available at several of the universities and technical schools around the country, either on a night school basis or in the form of a week or two of seminar. Those with some working knowledge of the subject will find the two-day

seminars sponsored at various locations by the Industrial Education Institute, Boston, worthwhile as a refresher and to broaden their scope of useful applications.

A few procedures based on the statistical approach will be suggested that have been helpful to the author and may be helpful to others. We propose to introduce a few of the terms used in this field and point out a few applications and some shortcuts.

If statistical methods and thinking are applied to the design of laboratory studies the resulting data will be most informative. Even so, some of the data are usually suspected of not reporting valid findings. It is therefore very helpful to apply a simple test enabling one to reject suspect data immediately so that the experiment can be repeated if necessary to obtain more valid data while the setup, technician and experimental environment are still available.

One such test is known as Dixon's Q test. It establishes a simple mathematical relationship between a suspected divergent value and the range of divergency of the rest of the data, and compares it with a set of values (Q

Partial Table of Q Values¹

No. of Replicates	Probability Level, % ₂			
	1	2	10	20
3	0.994	0.988	0.941	0.886
4	0.926	0.889	0.765	0.679
5	0.821	0.780	0.642	0.557
6	0.740	0.698	0.560	0.482
7	0.680	0.637	0.507	0.434
8	0.634	0.590	0.468	0.399
9	0.598	0.555	0.437	0.370
10	0.568	0.527	0.412	0.349

$$Q = \frac{D - N}{R}$$

where D = a suspected divergent value

N = the divergent value's nearest neighbor

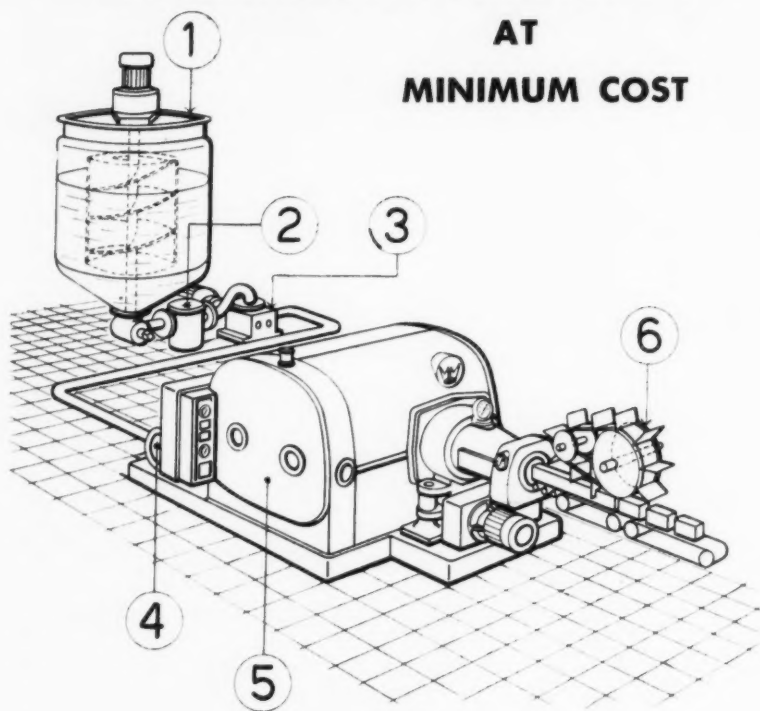
R = total range or difference between D and the value farthest from it.

¹ From Pierson and Fay (*Anal. Chem.*, 31, 12, pp. 25a-34a, Dec. 1959).

² Probability of obtaining by chance alone a value higher than that of the table.

The New **saix** COOLING PLODDER

**FOR CONTINUOUS PRODUCTION
AT
MINIMUM COST**



The savings in floor space, labor and production time effected by the SAIX COOLING PLODDER are really impressive. The drawing illustrates the mechanical simplicity of this latest equipment for continuous soap cooling.

(1) The hot liquid soap is drawn from the storage tank through filters (2), (3) and (4), into cooling plodder (5). Here it passes into an annular chamber between a cylinder rotating within a hollow fixed cylinder, both of which are water-cooled. The cooled soap is then compressed by rotating pistons in the collecting chamber. The semi-solid plastic soap then passes to the milling unit and thence to the compression cone, from which it is finally extruded as a continuous bar. It is cut into desired sizes by the continuous automatic cutting machine (6).

Pilot plant available for test at your factory

For further information call or write—



J. M. LEHMANN COMPANY, Inc.

550 NEW YORK AVENUE, LYNDHURST, N. J.

values) determined statistically for various probability levels and published in a table. Tables of these Q values are available in the literature (Dixon, W. J., *Ann. Math. Stat.*, 22, 68, 1951). A partial table of Q values particularly useful for rejection of data being prepared for cooperative laboratory studies was recently offered by Pierson and Fay (*Anal. Chem.*, 31, 12, pp. 25a-34a, Dec. 1959).

Although the probability values in this table are double those shown in the original table because it was prepared for a special case of so-called "2-tail" applications, it will still serve to illustrate some pertinent facts: Mathematics involved in statistical methods are, for the most part, fairly straight forward. Pitfalls in application are usually encountered in the selection of suitable probability levels and in correct interpretation of the evaluated data.

In the table we are offered a selection of Q values at four different levels of probability. We must ask ourselves—under the circumstances of our experiment, what is a sensible percentage of occurrences in which our values, by chance alone, will be greater than that selected from the table.

It would seem sensible, for example, when considering data produced in the lab involving replicate determinations made under carefully controlled conditions, to select a low probability value such as a one per cent level. Under this condition, a value would not be rejected unless it were at wide divergence from the other, closer ranged values presumed to be under control.

On the other hand, a high probability level of about 10 to 20 per cent will be appropriate where best possible values are sought embracing several variables of well known limitations. These might be buret errors, concentrations, temperatures, and indicator sensitivities in the standardizing of a solution where a large number of values are involved. (Turn to Page 231)

new patents

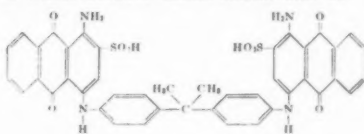
The data listed below are brief reviews of recent patents. Complete copies may be obtained from the publisher of this magazine:—MacNair-Dorland Co., 254 W. 31st Street, New York 1, N. Y. Remit 50¢ for each copy. For orders received from outside of the United States send \$1.00 per copy.

No. 2,927,900. Solid Detergent Composition and Process for Preparation Thereof, patented by Dmitry Alexis Shiraef, New York, assignor General Aniline & Film Corp., New York. A detergent composition is covered comprising a solidified homogeneous fusion mass of a normally liquid polyglycol monoether of a member of the group consisting of monohydric aliphatic and alicyclic alcohols of 8 to 20 carbon atoms and nuclear alkyl substituted monohydric phenols containing 5 to 20 carbon atoms in their nuclear alkyl groups, in which the polyglycol radical is a chain of 4 to 40 oxyalkylene radicals of 2 to 3 carbon atoms with a hydrate of a water-soluble light metal salt of the group consisting of magnesium, aluminum and calcium nitrates, magnesium and calcium chlorides, and sodium acetate, which is stable at fusion temperature, and urea, the weight ratio of said liquid polyglycol ether to said hydrated light metal salt ranging from 4:1 to 2:3, and the amount of urea being at least 0.6 part per part by weight of the mixture of said hydrate and said polyglycol ether.

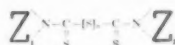
No. 2,927,882. Insecticide Formulations and Method of Making Same, patented by Leo Trademan, Chicago, Marshall A. Malina, Willmette, and Louis P. Wilks, assignors to Velsicol Chemical Corp., Chicago. A stabilized insecticidal composition is revealed comprising in combination: an insect toxicant selected from the group consisting of parathion, methyl parathion and malathion; a finely divided solid carrier selected from the group consisting of kaolin clay, attapulgite clay, diatomaceous earth, vermiculite and synthetic calcium silicate; and from about 0.5% to about 12% by weight of the carrier of a glycol selected from the group consisting of ethylene glycol, propylene glycol, diethylene glycol and triethylene glycol.

No. 2,930,760. Laundering Composition, patented by Edmund Frederick Gebhardt, Glendale, O., assignor to Procter & Gamble Co., Cincinnati. This invention consists of a launder-

ing composition for use in washing white fabrics and which imparts an alkaline reaction to aqueous solutions at conventional laundering concentrations comprising at least one water-soluble detergent selected from the group consisting of nonionic organic synthetic detergents plus an alkaline-reacting detergent builder, alkali-metal salts of higher fatty acids and alkali-metal salts of organic synthetic anionic non-soap detergents in combination with at least about 0.0014% by weight, but less than about 0.04% by weight based on the water-soluble detergent, of a bluing agent which is a water-soluble alkali-metal salt of



No. 2,927,899. Detergent Germicidal Compositions and Process of Making Same, patented by Seymore Goldwasser, Teaneck, N.J., assignor to Lever Brothers Co., New York. A germicidal detergent composition is patented substantially free from free alkali comprising soap, a germicidal amount of a thiuram sulfide having the formula:



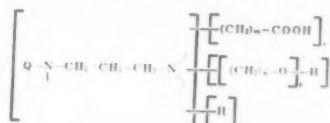
where n is an integer from one to six and Z_1 and Z_2 are hydrocarbon radicals having from two to eight carbon atoms and are selected from the group consisting of a single bivalent cycloaliphatic radical and two monovalent aliphatic radicals, and a tin compound in a valence state higher than two in an amount to stabilize the detergent composition against decomposition of thiuram sulfide as evidenced by the development of odor and staining characteristics.

No. 2,928,772. Hair Conditioning Composition Containing N (Higher Acyl Colamino Formylmethyl) Pyridinium Chloride and a Fatty Acids Monoglyceride Sulfate Anionic Detergent, patented by Albin Fritjof Anderson, assignor to Colgate-Palmolive Co., Jersey City, N.J. Revealed is a clear liquid shampoo composition having hair conditioning properties comprising by weight approximately 10 to 35 percent of an ammonium coconut oil fatty acids monoglyceride sulfate and between $\frac{1}{2}$ and 7 percent N(lauroyl colamino formylmethyl) pyridinium chloride, and an aqueous medium.

No. 2,928,797. Aqueous Dispersion of Synthetic Polymers for Floor Polishing Composition, patented by Marion O. Brunson and William M. Gearsonhart, Kingsport, Tenn., assignors to Eastman Kodak Co., Rochester, N.Y. The patent covers a wax composition comprising (A) 16-

19% oxidized thermally degraded polyethylene having an acid number of 8-12 obtained by oxidizing polyethylene which has been thermally degraded to a molecular weight of 2000-4000 from a molecular weight of 10,000-30,000, (B) 4-6% of a resinous material selected from the class consisting of bleached, dewaxed shellac and maleic modified rosin which are soluble in ammonia, (C) 14-17% polymethacrylate obtained by emulsion polymerization, (D) 45-55% of a polymer of styrene, divinyl benzene and acrylonitrile having a molecular weight of over 150,000 and a particle size of less than 0.01 micron obtained by emulsion polymerization, and (E) 8-12% of a mixture of oleic acid and a plasticizer.

No. 2,927,901. Materials for Cleansing the Hair, patented by Edouard J.-F. Charret, Caluire, France. The patent describes a composition for cleansing live human hair, which is a homogeneous aqueous solution of a diamine of the general formula

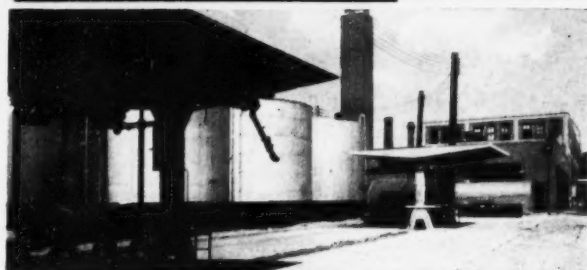


where Q represents a hydrophobic radical selected from the class consisting of straight aliphatic residues of fatty acids containing 12 to 22 carbon atoms and the dehydroabietyl radical, m represents an integer from 1 to 3, n represents an integer from 2 to 3, p represents a number from 1 to 8, x and y each represent a number from 1 to 2, the sum $x+y$ being at most equal to 3, and z represents 3 ($x+y$); and a lower aliphatic carboxylic acid having from 1 to 5 carbon atoms in such an amount as to impart a pH-value in the range 3-7 to said aqueous solution.

No. 2,927,881. Dimethyl-2,2,2-Trichloro-1-N-Butyryloxyethylphosphonate, patented by John E. Casida and Belton Wayne Arthur, Madison, assignors to Wisconsin Alumni Research Foundation, Madison. An insecticidal composition is described containing as an essential active ingredient dimethyl-2,2,2-trichloro-1-n-butyryloxyethylphosphonate and an insecticide carrier.

No. 2,929,760. Insecticidal Composition Comprising Pyrethrins and Octachlorodipropylether, patented by Friedrich Becke, Bad Duerkheim, Heinrich Sperber, Ludwigshafen (Rhine), Herbert Stummeyer, Mannheim, and Heinrich Adolphi, Limburgerhof, Pfalz, assignors to Badische Anilin- & Soda-Fabrik, A.G., Ludwigshafen (Rhine) Germany. This claim covers an insecticidal composition comprising pyrethrins and, as a synergist, 2,3,3,3,2',3',3',3'-octachlorodipropylether.

**From
This
Plant**



Ample tank storage for efficient bulk material handling.

Modern equipment assures product consistency and uniform high quality.

Krystall stands ready to meet your detergent requirements

When it comes to filling your detergent requirements you can depend on the Krystall Chemical Co. With our efficient plant and modern laboratory plus an excellent technical staff we are ready and able to handle your surfactant needs.

Our plant has bulk storage for up to 600,000 gallons of raw materials and finished products including storage facilities for handling stabilized liquid Sulfur Trioxide. Warehouse space for over 2000 drums of finished materials, and 600 feet of railroad siding. Facilities for simultaneous loading and unloading of 10 trucks and 5 railroad cars.

Krystall Chemical Co., primarily a manufacturer of detergent intermediates also offers extensive compounding and packaging facilities. We have just installed another new, high speed automatic filling line for handling either plastic bottles or cans.

Our technical staff will welcome the opportunity to help with your production, formulation, product development and analysis. . . . What ever problem you may have write or call us today.

SOME OF THE EXPANDING KRYSTALLEX SERIES . . .

KRYSTALLEX A—A sodium lauryl sulfate with a very low salt content and low viscosity.

KRYSTALLEX C—A sodium lauryl sulfate characterized by its high uniform viscosity—excellent base for creme shampoos.

KRYSTALLEX T—A triethanolamine lauryl sulfate with high activity, low cloud point, very light color and color stability.

KRYSTALLEX AM—An ammonium lauryl sulfate with low salt content.

KRYSTALLEX S-26—A new detergent manufactured for shampoo use.

KRYSTALLEX S-330, and **KRYSTALLEX S-365**—Purer forms of alcohol sulfates recommended especially for rug and upholstery cleaning.

KRYSTALLEX S—A conventional type of dodecylbenzene sulfonic acid.

KRYSTALLEX SX—A pure form of dodecylbenzene sulfonic acid.

KRYSTALLEX S-63—A specially purified sodium dodecylbenzene sulfonate. Clear and odorless liquid. Excellent base for all types of liquid detergents.

KRYSTALLEX S-75—An ammonium alkyl phenoxyethylene sulfate.

KRYSTALLEX LX—Triethanolamine alkyl aryl sulfonate, 60% active.

KRYSTALLEX LA—A non-ionic fatty acid alkanolamide manufactured for use as a foam stabilizer.

KRYSTALLEX CD—A coconut fatty acid alkanolamide useful for thickening, etc.

KRYSTALLEX CDA—A modified coconut fatty acid alkanolamide used in floor cleaner concentrates. Has outstanding resistance to hard water.

KRYSTALLEX LIQUID DISHWASHING DETERGENTS—Completely formulated products ready for dilution and packaging.



krystall chemical co.

Phone Bittersweet 8-2325 • 1301 W. Belden Ave., Chicago 14, Ill.

**"SPECIALTY
ORGANIC
CHEMICALS"**

products and processes

New Grade Gum from Carbide

A NEW fast dissolving water-soluble grade of hydroxyethyl cellulose was unveiled by Union Carbide Chemicals Co., New York, at a press conference held March 31. "Cellosize" QP-4400 can be stirred into water solution almost as easily as sugar and without forming agglomerates. A demonstration by S. G. Sellers, product manager for Carbide's "Cello-size" and "Polyox" series of water soluble resins and main speaker at the meeting, emphasized these points.

Hydroxyethyl cellulose is a nonionic thickener compatible with anionics, cationics, and nonionics, a protective colloid and stabilizer, soluble in hot and cold water, and has a high tolerance for electrolytes. It acts as a stabilizer thickener and dispersant in shampoos and hair sprays, and it may be used in formulating agricultural sprays, dusts and wettable powders. Main users are in the textile, paper, and paint fields.

The price of "Cellosize QP-4400" is 89 cents per pound. A cut of 12 cents per pound to 85 cents for other grades was revealed by Mr. Sellers.

Purpose of the meeting was to demonstrate the far flung importance of water soluble gums and the advantages of synthetic gums over their natural counter parts. Over three billion pounds of water soluble gums are consumed annually, according to Mr. Sellers. Starch accounts for about two billion pounds. Among synthetics, CMC takes an important place. Approximately 20 million pounds of this material are used as antired-osition agent in synthetic detergents.

In addition to hydroxyethyl cellulose "Polyox" water soluble resins received attention. Their manifold uses include synthetic de-

tergent bars, where they act as binders and anti-sloughing agents, hair sprays where they are the film formers, and individual water soluble packages. Details were reported in the December 1957 issue of *Soap and Chemical Specialties*.

Modern Pack Toothpaste

Toothpastes intended for pressure packaging requires a fairly high glycerine content because the nozzle of the package is usually permanently open to the atmosphere, according to A. B. Cobb, Unilever, Ltd., Isleworth, Middlesex, England. Entitled "The Uses of Glycerine in Toothpaste", Mr. Cobb's article appeared in the April, 1960 issue of *Soap, Perfumery & Cosmetics*. A glycerine content of about 60 per cent of the aqueous phase is suggested for such products. A binding agent of good suspending power and without tendency to gel is required. This is critical, because partial gelation of the toothpaste could cause cavitation around the dip-tube during use, which in turn would lead to loss of nitrogen while there is still a fair amount of product in the can.

The author suggests the following formulation:

	parts
Dicalcium phosphate dihydrate	50.00
Glycerine	28.00
Gum tragacanth	1.30
Sodium lauryl sulfate	1.20
Saccharin	0.13
Flavor	1.00
Water and other additives	18.37

Semiliquid consistency is required in toothpastes intended for packaging in plastic tubes and bottles. The orifice of such packages is fairly small and drying out of the product in this small opening would be serious. A glycerine content of 50 per cent of the aqueous

phase is therefore required, according to the author. Flavor level "should be above normal," since there is risk of flavor loss through the container walls, the article points out. No corrosion inhibitor is required. The following formulation is suggested:

	parts
Dicalcium phosphate dihydrate	35.00
Glycerine	30.00
Sodium carboxy methyl cellulose	1.00
Sodium lauryl sulfate	1.20
Saccharin	0.12
Flavor	1.50
Water	31.18

The author stresses that these formulations are mere suggestions. Any change in any one of the ingredients will have a marked influence on the characteristics of the final product.

Novel Shampoos

Shampoos formulated with cationic detergents are said to impart softness and combability to human hair, to improve gloss and firmness. However, these compounds may cause irritation in persons having sensitive skin. The use of nonionic tertiary dodecyl mercaptan derivatives in combination with cationics is said to minimize the risk of such irritation. To improve the foaming properties of such combinations the addition of small amounts of acyl-derivatives is suggested. British patent 818,261, Ciba Ltd., Basle, 1959.

Ditertiary propylene diamines are suggested as shampoo ingredients in British patent 823,303, granted to Soc. Monsavon-L'Oreal, Paris, France. Such shampoos are said to have excellent cleansing and softening properties.

Spray Drying Bulletin

A four-page bulletin on spray drying was recently issued by Nerco-Niro Spray Dryer division of Nichols Engineering & Research Corp., 70 Pine St., New York 5. The bulletin, No. 239, highlights research, engineering, testing, and custom drying facilities available. Illustrated are four of the division's spray dryers in operation at its Netcong, N.J., laboratories.



Looking toward tomorrow, visualizing the shapes and courses it will take, anticipating its needs...this search for ways to serve industry better and more fully has been an unremitting spur to Sonneborn, since many tomorrows ago. Inasmuch as this quest dates back to the turn of the century and has been concentrated upon a specialized segment of petroleum refining, it is not surprising that in products, technical assistance, service, Sonneborn Goes Further.



**SONNEBORN
CHEMICAL AND REFINING
CORPORATION**

White Oil Division, 300 Park Ave. South, New York 10, N.Y.

SPECIALISTS IN PETROLEUM SULFONATES (PETRONATES)
WHITE MINERAL OILS • PETROLATUMS

WO-8

— We have changed our name from L. SONNEBORN SONS, INC. to SONNEBORN CHEMICAL AND REFINING CORPORATION

book reviews

Fats and Oils Analysis

Methods for the analysis of fats and oils, standardized and non-standardized, are assembled in a new book entitled "The Analysis of Fats and Oils," by V. C. Mehlenbacher. The author is chief chemist at Swift & Co.

Intended for the "fat and oil analyst who is concerned with problems of production control and trading specifications," the book includes official methods developed in the United States and other countries and other methods in common use. Tests are discussed and compared from the point of view of significance, application, scope, limitations and precision. Methods intended for research or still in the stage of development are not covered, unless of exceptional importance such as chromatography.

The Analysis of Fats and Oils, by V. C. Mehlenbacher, Garrard Press, Champaign, Ill., April 1960, 640 pages, six by nine inches, cloth bound, price \$12.00.

New Merck Index

The seventh and much enlarged edition of the *Merck Index* has just become available. Subtitled "An Encyclopedia for Chemists, Pharmacists Physicians, and Members of Allied Professions," the volume is published by Merck & Co., Rahway, N. J., and sold at cost as a service to the "thousands of scientists for whom it is intended," according to the preface.

Over 1,600 pages of text carry more than 10,000 descriptions of individual substances, about 3,300 structural formulas and approximately 30,000 names of chemicals and drugs, alphabetically arranged and cross indexed. This separate cross index is newly introduced and is a very useful feature, enabling one to locate a compound by either generic name,

brand name or systemic chemical designation.

A special section lists over 400 organic "name" reactions, with original and review references, including a description and structural representation of each reaction. An up-to-date periodic table is arranged in accordance with the most recent concept of nuclear science. A vast range of informative material is presented in tabular form in a 300-page section of appendices.

Most recent predecessor of this volume appeared in 1952. Editor of the current and the 1952 editions is Paul G. Stecher.

Merck Index, 1600 pages, 7½ by 9½ inches, cloth bound, available from publications department of Merck & Co., Rahway, N. J., or local book dealers, at \$12.00 a copy.

New Booklet from Verona

A 16-page illustrated booklet from Verona Aromatics, Newark, N. J., describes the operations of Haarmann & Reimer G.m.b.H., Holzminden, Germany. Verona is the U. S. distributor for the German firm, which is a producer of aromatic chemicals, essential oils, compounds, and flavors. The booklet describes the development, accomplishments, and facilities of the company including a page devoted to its aerosol laboratory operation. Copies may be obtained from Verona, 26 Verona Ave., Newark 4, N. J.

New Booklet on Pyrethrum

A folder was published recently by Charles Hurd Associates, 1120 Park Ave., New York 28, describing the qualities of pyrethrum in the manufacture of insecticides. Issued on behalf of the growers of pyrethrum in Africa, the booklet explains how the active ingredient pyrethrins provides insecticidal action when combined with syner-

gists. Forms in which the insecticide is manufactured are listed, and explanation is given of the difference between pyrethrum and other types of insecticide. Also listed are major American importers and refiners from whom information about the pyrethrum insecticides may be obtained. The booklet is available from Hurd.

More "Carbowax" Data

A new 40-page booklet describing "Carbowax" polyethylene glycols for use in pharmaceuticals and cosmetics has just been published by Union Carbide Chemicals Co., 30 East 42nd Street, New York 17.

In addition to their applications in ointments, creams, etc., emphasized in this booklet, "Carbowaxes" may be used as binders in synthetic detergent bars and as antidusting agents in bath powders.

PFW Flavor Catalog

A new 32-page list of its flavor specialties was published recently by Polak's Frutal Works, Inc., Middletown, N. Y. Copies are available.

Vanderbilt Data Sheet

R. T. Vanderbilt Co., 230 Park Avenue, New York, has just published a technical data sheet giving formulations for automotive specialties incorporating Vanderbilt products. Various grades of "Veegum" emulsion stabilizer and suspending agent and "Rayox RG" brand of water dispersible anatase titanium dioxide are shown as constituents of liquid auto polishes and cleaners for conventional and pressure packaging. Formulations with these materials are presented also for paste form polish, radiator anti-leak and white wall tire cleaner.

NEW PERSPECTIVES
IN PERFUMÉRY

Rare as the far-ranging
imagination of the poet . . .
FLEUROMA contributes to the
science of chemical specialties
the distinctive and unusual in
perfume compounds. With the true
creativity that admits of no
limitation, FLEUROMA offers fragrance
horizons as broad as the combined
possibilities of chemistry and
nature . . . approaches masking
problems from uniquely
different angles to give you
"new perspectives in perfumery."

F L E U R O M A

NEW YORK

PARIS

LONDON

SAO PAULO

New Crimping Head

Scientific Filter Co., 57 Rose St., New York 38, recently introduced a new crimping head called



the "Steri-Tite" for use with its air operated bench-type "Whirlwind" screw capper. Designed to apply all sizes of aluminum seals to bottles, the crimping head has four jaws said to provide a neat and positive closing. About 40 to 50 containers per minute can be handled by the device which is equipped with a chuck that is forced down on the seal by air pressure.

Soap Plant Observer

(From Page 224)

ber of replicates (10 or more) are made.

In next month's column we shall further develop the subject of statistics in experiment evaluation.

* * *

Where to get an inexpensive small pump for metering liquids in the lab or for metering small streams of additives into process under a sizeable pressure? This is a frequently encountered question.

In talking over a process re-

cently with Dr. Sol Boyk, Ottawa Chemical Company, the subject of small metering pumps came up. According to Sol, one of the best of the inexpensive pumps for accurate and delicate metering is the "Zenith," (Jackson & Church Co., Saginaw), used in rayon spinning for forcing exact amounts of spinning solution through the spinning jet. More than 500,000 of these pumps are said to be in continuous operation in this industry—which probably explains the modest price of this precision device.

The "Zenith" is a gear pump about five inches long with two gears housed within a center plate between two side plates. Parts in contact with the metered fluid are of stainless steel. Simplicity of design combined with an extremely high degree of standardization and interchangeability of parts probably accounts for its popularity. Very close tolerances help to avoid slippage of fluid across gear faces, if intake and discharge pressures are balanced. The pumps deliver anywhere from 0.3 to 3 cc per revolution within a range of sizes priced at from \$30 to \$100.

The "Zenith" pump combined with a Graham transmission permits a range of two to 200 rpm, depending on the lubricating qualities of the metered fluid. Such setups are particularly useful in the lab as flexible delivering and metering devices in the range of three to 650 cc per minute, depending on size.

Since pump drive gears can be procured with an assortment of teeth numbers, differential metering techniques can be used to deliver very tiny flows quite reliably and constantly. If the second pump is rigged for slightly slower speed it cannot handle full delivery of the first pump. The differential delivery is the difference in displacement of the two pumps per revolution of the line shaft pinion driving both pump drive gears; and this delivery goes on to process through a "T"-connection. For example, two pumps of equal size

New Pneumatic Sprayer

Spraying Systems Co., 3217 Randolph St., Bellwood, Ill., recently introduced a new size spray-



er with plastic jar and mounting cap for coating, moistening, and lubricating operations. Requiring connection to a one-quarter inch air hose, the sprayer is available with a variety of nozzles in capacities of from 0.32 GHP at 10 psi to 11.4 GPH at 60 psi. The plastic jar and cap are said to be resistant to a wide range of chemicals and the wide mouth jar is reported to provide easy filling. Other features of the unit are finger-tip trigger action, trigger lock for continuous spraying, and a brass or stainless steel nozzle which is reported to be resistant to corrosive liquids. Complete information is available in the firm's data sheet 6000.

are arranged in series with a "T" fitting between the discharge of the first pump and the intake of the second. Assuming both have a displacement of 0.584 cc per revolution, the first has a 42 tooth drive gear and the second has a 44 tooth drive gear, then the differential flow per revolution of the driving pinion will be $\frac{2}{44}$ ths of 0.584 cc, or 0.0265 cc—a very small quantity indeed. At a 20 rpm rate, such a pumping system would be capable of delivering 16 cc per hour. By proper selection of pumps, gears and speeds, differential deliveries up to 635 cc per hour seem attainable.

BORAX

Imparts beneficial qualities to hand cleansers. Special grades available for commercial and industrial detergents and cleansers. Sodium Tetraborate, technical 99.5% $\text{Na}_2\text{B}_4\text{O}_7 \cdot 10\text{H}_2\text{O}$. Grades: fine and coarse granular, powdered.

SALT CAKE

Low cost, versatile builder for detergents, cleansers and chemical specialties. Sodium Sulphate anhydrous, 99% Na_2SO_4 minimum. Grades: Papermakers', industrial and Syndet.

SODA ASH

A dependable source of alkali for industrial detergents and cleaning compounds. Sodium carbonate, technical 58% Na_2O . Grades: granular and fine granular.

TRONA[®] offers the advantages of a single source of these basic chemicals for premium grade soaps and cleaning compounds!

*quality... uniformity and
the lowest possible cost!*



Trona representatives will gladly help you in the most economical and efficient application of AP&CC basic chemicals to your products and processing needs. Send for your copy of the complete Trona catalog.



American Potash & Chemical Corporation

Executive Offices: 3000 WEST SIXTH STREET, LOS ANGELES 54, CALIFORNIA

Sales Offices: 3000 W. 6TH ST., LOS ANGELES 54, CALIF., DU 2-8231 • 99 PARK AVE., N.Y. 16, N.Y., OX 7-0544 • 235 MONTGOMERY ST., SAN FRANCISCO 4, CALIF., DO 2-1300 • 1320 S.W. BROADWAY, PORTLAND 1, ORE., CA 6-2463 • 214 WALTON BLDG., ATLANTA 3, GA., JA 2-3361 • 3557 W. PETERSON AVE., CHICAGO 45, ILL., CO 7-0817 • 1600 FAIRFIELD AVE., SHREVEPORT, LA., SH 5-4488 • 2025 RIVERSIDE DRIVE, COLUMBUS 21, OHIO, HU 6-9465

News...

PEOPLE • PRODUCTS • PLANTS

New Colgate Executives

Kob to Boyle-Midway

Clough Heads Click

Tenise Expands Plant

Appointment of Elliot M. Hartford as vice president in charge of marketing was announced late last month by A. E. Hartman Co., South Norwalk, Conn. Mr. Hartford was formerly with Fayerweather Manufacturing Co. for 12 years, most recently as department manager. Hartford makes "Prest" wire.





Akron, Portage 2-8881
Atlanta, Cedar 3-4215
Quincy-Boston, Granite 9-2909
San Francisco, Lombard 4-1261
Chicago, Financial 6-2960
Houston, Mohawk 4-9868
Los Angeles, Dunkirk 9-1211
Montreal, Wellington 5-4602
Toronto, Belmont 3-6289

**FOR QUALITY
SURFACTANTS
AT COMPETITIVE
PRICES CALL
WITCO**

You'll find that the helpful man at the other end of the line is interested in supplying you with the quality Witco Emcol product that best suits your application. And the price is as right as his selection. Below, appear only a few of the products, which make up the Witco Emcol line.

EMULSION DEGREASING CHEMICALS

EMCOL P10-59... oil-soluble amine salt of dodecylbenzene sulfonic acid

EMCOL P-5900... sulfonate base anionic-nonionic blend

EMCOL H-50A... anionic-nonionic blend

FLASH-FOAMING DETERGENTS

... for rapid wetting, shampoos, textile detergents

EMCOL 4100 SERIES... sodium sulfosuccinate esters of fatty acid alkanolamides

DETERGENT COMPONENTS

... for "built" cleaners—viscosity modifiers, foam stabilizers

EMCOL 5100 SERIES... fatty alkanolamine condensates

EMCOL P10-49... an exceptionally water-soluble alkyl aryl sulfonate with excellent detergent properties



WITCO

CHEMICAL COMPANY, Inc.
122 East 42nd Street, New York 17, N.Y.
Murray Hill 7-7979

NEWS

Keith in Colgate Post

The appointment of Robert E. Keith as director of traffic for Colgate-Palmolive Co., New York,



Robert E. Keith

was announced last month by Edward H. Little, chairman and president. Formerly manager of traffic for the toilet articles division, Mr. Keith succeeds Robert E. Crowley, who has retired after 43 years with the company. Mr. Keith joined the Colgate Co. in Jersey City in 1917 as a clerk in the traffic department. In 1925 he was transferred to Chicago to handle regional traffic and warehouse, and in 1940 was appointed traffic manager of the Jeffersonville, Ind., plant. Mr. Keith became toilet articles division traffic manager in 1957.

Texize Expands

A doubling of production capacity will result from expansion of production and storage facilities currently being installed by Texize Chemicals Inc., chemical specialties firm of Greenville, S. C. More than 13,500 square feet of working space are being added to the Greenville plant. Among the new processing equipment being set up there are modern floor wax manufacturing facilities.

Storage capacity for finished

products has been increased by 75,000 gallons, according to W. J. Greer, Texize president. Installation of semi-automatic filling equipment for bulk products in five, 15, 30, and 55 gallon containers has sharply stepped up output in that department.

Mr. Greer also reported an increase in production at the firm's plant in Palestine, Tex., due to the manufacture of additional products and an increase in storage facilities.



West Quarterly Report

Increased sales and earnings are shown by West Chemical Products, Inc., Long Island City, N. Y., in a report for the quarter ended Feb. 27. Net sales were \$5,125,000 in quarter ended Feb. 27, 1960, compared with \$4,805,000 in the corresponding quarter of 1959. Net income after taxes rose to \$121,000 from \$116,000. Earnings per common share were 29 cents in the quarter ended Feb. 27 of this year compared with 28 cents in last year's first quarter.



New Officers at Fels

Cyril G. Fox, president of Fels & Co., Philadelphia, was elected last month to the newly created position of chairman of the board of directors and continues as president. Also elected was David C. Melnicoff as vice-president of administration. Mr. Melnicoff had been director of planning since he joined the company last July. Other officers who were re-elected are: Max Brown, vice-president of sales; Harry J. Hugues, vice-president of production; Robert F. X. McRae, secretary; and Joseph J. Greipp, treasurer. All these officers serve as directors of the company. Fels manufactures "Fels Naptha Soap" and household detergents.

Skillman to Wrisley

Paul Skillman, Jr., has been appointed general sales manager of the Allen B. Wrisley Co., Chicago,



Paul Skillman, Jr.

a wholly owned subsidiary of Purex Corp., Ltd., South Gate, Calif., it was announced last month by Eugene F. Bertrand, Wrisley president. Mr. Skillman was with the Toni Co., Chicago, division of Gillette Co., Boston, for the past 12 years where he served as territory salesman, division sales manager, and finally merchandising manager. Wrisley has been manufacturing soaps and toiletries since 1862.



New Johnson Directors

The appointments of James W. Sandifer and Ernest L. Estes as regional directors for the Far East and Latin America, respectively, at Johnson's Wax International, Racine, Wis., were announced recently by Howard M. Packard, president of S. C. Johnson & Son, Inc. The new regional directors supervise operations of Johnson subsidiaries and distributors abroad and implement programs of the international organization, headed by A. O. Fisher, vice-president.



For success in creating
Aerosol perfumes and colognes
rely on Givaudan ability

Superior skill, artistry, creative imagination, knowledge of consumer preferences...these are the foundations on which a successful perfume or cologne is built. But...an aerosol fragrance requires even more.

Givaudan offers a complete line of perfume and cologne fragrances which have been specifically prepared to meet the requirements of pressure packaging. Or, we can custom-make a fragrance to meet your specific aerosol needs.

Our staff will welcome the opportunity to discuss your aerosol fragrance requirements.



GIVAUDAN-DELAWANNA, INC.

321 West 44th Street, New York 36, N.Y.

SOAP and CHEMICAL SPECIALTIES



M. J. Siciliano

Crag Appoints Two

Two sales appointments at Crag Agricultural Chemicals were announced recently by Union Carbide Chemicals Co., division of Union Carbide Corp., New York. M. J. Siciliano is now manager, sales services, and J. B. Harry has been named sales manager. Both men previously held sales management posts in the Crag group.

— ★ —

Tesco Expands

A new 10,000 square foot warehouse and manufacturing plant, located in Edward, Miss., has just been opened by Tesco Chemicals, Inc., of Atlanta, Ga. The firm makes water purification and sewage treatment chemicals and related chemical specialties.

— ★ —

Aireactor in Britain

Aireactor of Great Britain, Ltd., with executive offices in London, has just been organized, it was announced last month by Aireactor Corp. of New York. The new organization will handle the entire line of Aireactor space deodorizers and other products throughout the United Kingdom. Like the parent company, the new firm will deal with deodorization problems of processing and sewage disposal plants, with institutional odor problems, and with smoke odor after fires. Several insurance companies are reportedly interested in this last phase of the firm's work.

E. L. Pray, one of the parent



J. B. Harry

company's engineers is going to London to supervise the construction of several Aireactor industrial installations and to organize a British marine division.

— ★ —

NSSA May 22-25

The 37th annual convention and merchandise exhibition of the National Sanitary Supply Association will be held at the Fontainebleau Hotel, Miami Beach, Fla., May 22-25. Close to 200 manufacturers of all types of sanitary supplies, chemicals, and equipment will exhibit their product lines at the meeting. A record attendance is expected. A feature of the convention will be the start of a new sales and business management training program for association members. The transaction of association business will be conducted by Shim D. Lehrman, A. J. Lehrman and Sons, Harrisburg, Pa.,

president of the association, and new officers and district directors for the coming year will be elected. Leo J. Kelly, executive vice-president, will give his annual report. Other highlights of the program are a dinner, banquet, parties, and a floor show. Exhibits will be open throughout the four day meeting and attendance is limited to NSSA members and those eligible to join the association.

— ★ —

Warfarin Made in Canada

Arrangements were completed last month for the manufacture of warfarin anti-coagulant rodenticide in Canada according to Ward Ross, managing director of the Wisconsin Alumni Research Foundation, holders of the warfarin patents. With commercial production already underway, the new Canadian source will supply the compound to formulators of warfarin-based products in the rodenticide and pharmaceutical field throughout Canada. Canadian manufacturing facilities for warfarin are in Vancouver, B. C.

— ★ —

Armour to Build Lab, Plant

Armour Industrial Chemical Co., Chicago, announced last month that it plans to build a research laboratory and pilot plant in McCook, Ill. The two one-story buildings will cover 30,000 square feet of space and are scheduled for occupancy in the late fall. They will be used for applied research on fatty acids and derivatives.

Recently completed chemical research and development center of Food Machinery and Chemical Corp. at Princeton, N. J. Center houses research personnel and inorganic product application and sales service groups as well as chemical patent department. Specially designed pilot scale areas have been built for extended studies in detergents and other fields.





IN YOUR IMPROVED PRODUCTS . . .

Jefferson Ethanolamines attend a baby shower

Anticipating time . . . boy or girl? One thing's for sure. The child's future will be more comfortable and healthy, thanks to your practical applications for Jefferson Ethanolamines. Surrounding this soon-to-be mother are cosmetics and toilet goods, wool blankets and baby clothing, rubber pants and gloves, and behind scenes . . . sweetened natural gas to cook food and dry clothes.

Versatile ethanolamines are hygroscopic, and mis-

cible with water, most alcohols and polyols. There's hardly an industry where there isn't some profitable application for these multifunctional chemicals. For all your ethanolamine requirements — mono-, di-, or tri- (both regular and 99% grades), look to Jefferson for prompt shipments in any quantity . . . pioneer of ethanolamine shipments by barge. Jefferson Chemical Company, Inc., 1121 Walker Avenue, P. O. Box 303, Houston 1, Texas.



Ethylene and Propylene Oxides, Glycols, Dichlorides, Carbonates
SURFONIC® Surface-Active Agents • Ethanolamines • Morpholine
N-Alkyl Morpholines • Polyethylene and Polypropylene Glycols
Piperazine • Piperazine Salts • Nonyl Phenol • Caustic Soda
HOUSTON • NEW YORK • CHICAGO • CLEVELAND • CHARLOTTE • LOS ANGELES

JEFFERSON CHEMICALS

Costello in Colgate Post

The appointment of Christopher H. Costello to the newly created position of director of re-



Christopher H. Costello

search for Colgate pharmaceutical laboratories division of Colgate-Palmolive Co., New York, was announced last month by Herbert P. Nack, vice-president in charge of the division. For the past 10 years, Dr. Costello was with the Columbus Ohio Pharmacal Co., most recently as vice-president and scientific director.

FDA Registers 'Thuricide'

The first microbial insecticide to be exempted by the Federal Food and Drug Administration from any tolerance requirement has just been placed on the market by Stauffer Chemical Co., New York. Trade named "Thuricide", the material is composed of spores of *Bacillus thuringiensis* Berliner. (See *Soap and Chemical Specialties*, March, 1960, p. 83).

"Thuricide" is the registered trade name of Bioferm Corp., Wasco, Calif., manufacturer of the active ingredient. Stauffer will formulate "Thuricide" into two products, a dust and a wettable powder, which it will market on a world wide basis.

Said to be effective against many important insect pests including most caterpillars and some beetles, the material is claimed to be nontoxic to plants, man, and animals. It is compatible with most other insecticides, fungicides, car-

riers and diluents, according to Bioferm.

Stauffer has applied to USDA for label registration on the formulated products.

Werner G. Smith Dies

Werner G. Smith, 71, a former executive vice-president of Archer-Daniels-Midland Co., died April 6. Mr. Smith resigned from ADM in 1950 to organize his own vegetable oil firm, Werner G. Smith, Inc., of which he was president until 1955, and chairman of the board until his death.

'Fair Trade' Ruled Illegal

The Minnesota Supreme Court declared the state's 23 year old "fair trade" law unconstitutional, it was reported recently. Under this law manufacturers and distributors were permitted to fix minimum prices for their merchandise. The Supreme Court's decision reversed an earlier district court ruling.

"The purported authority to fix prices is an unconstitutional exercise of legislative powers," according to Justice William P. Murphy, who wrote the unanimous decision issued by the six member court.

Century Appoints Hogan

The appointment of John F. Hogan, Jr., as director of commercial chemical development for Cen-



John F. Hogan, Jr.

tury Chemical Corp., New York, was announced last month by Theodore S. Hodgins, president. In his new post, Mr. Hogan's duties include development of new products, from the evaluation of new product ideas to market research studies. Most recently in development work on two food additives at Century, Mr. Hogan had been with Chemo Puro Manufacturing Corp., Newark, N. J., as manager of its market development department before it was acquired by Century last year.

Dr. R. C. Sherwood, (standing, right) vice-president and technical director of Sterwin Chemicals, Inc., New York, discusses food additives with panel during company's recent annual sales conference at Sky Top, Pa. Other participants in discussion were, left to right, Robert S. Whiteside, president; Dr. J. K. Krum, assistant technical director, William X. Clark, vice-president in charge of sales; E. P. Hassler, assistant sales manager and F. A. Baldauski.



**dry
neutralization**

**emulsion
cleaners**

**liquid
detergents**

PILOT

A

B

S

99

The building block for all sulfonate detergents...

Pilot ABS-99, dodecyl benzene sulfonic concentrate, offers amazing flexibility for your detergent formulation: for direct neutralization of carbonate or bicarbonate mixtures to give dry compounds; can be mixed with a variety of bases and solvents for oil or water dispersable products; will form low sulfate liquids and pastes of light color for all-purpose liquid detergents; will form amine sulfonates which are directly soluble in oil, alcohol and non-aqueous media.

ABS-99 is made by Pilot's unique *Cold Processing* and gives 14% more active ingredient than ordinary 88% pure sulfonic concentrates. Detergent products can be made more efficient and manufactured at a lower processing cost by using highly concentrated Pilot ABS-99.

Because of its high purity, ABS-99 may be kept in plain steel containers!

Write now for technical information and sample.



PILOT *Chemical Company
of California*

P.O. BOX 22130 • LOS ANGELES 22

Lesch Succeeds Little as Colgate Head

GEORGE H. LESCH was elected president of Colgate-Palmolive Co., New York, at a

transferred to Mexico where he served during the next 16 years successively as office manager, assis-



George H. Lesch

board of directors meeting which followed the annual stockholders' meeting, April 27. Mr. Lesch succeeds Edward H. Little as president of the company. The board re-elected Mr. Little as chairman and chief executive officer. At the same time Ralph A. Hart, executive vice-president and a director of the parent company, was elected president of Colgate-Palmolive International, a position previously held by Mr. Lesch. All other officers were reelected.

Colgate's new president joined the organization in 1932 as a member of the foreign accounting department. In 1939 he was



Edward H. Little

tant general manager, and general manager of Colgate's Mexican subsidiary. In 1955 Mr. Lesch became vice-president of Colgate-Palmolive International in charge of sales and advertising for the United Kingdom and continental Europe. He was elected a vice-president and a director of the parent company and president of Colgate-Palmolive International in 1957.

Mr. Hart, newly elected president of the International organization, joined Colgate in 1932. He started as a salesman for the firm's Canadian subsidiary and later became vice-president of the Canadian company. From 1938 to

1942 he served as managing director of Colgate's subsidiary in India and from 1948 to 1951 he held a similar post in Australia. In 1951 Mr. Hart was elected vice-president of Colgate-Palmolive International in charge of sales and advertising for the United Kingdom and continental Europe. He became president of Colgate-Palmolive International and a vice-president of the parent company in 1955. He was elected a director of the company in 1956 and has been executive vice-president for the past three years.

At the stockholders' meeting, which preceded the board meeting and election of officers, 15 directors of Colgate-Palmolive Co. were reelected. In addition, John L. Bricker was elected a director to take Stuart Sherman's place on the board. Mr. Bricker succeeded Mr. Sherman last year as corporate vice-president for marketing, following Mr. Sherman's withdrawal from active participation in the business because of ill health.

— ★ —

Curtis of Monsanto Dies

Francis J. Curtis, 65, retired vice-president for personnel and former member of the board of Monsanto Chemical Co., died of heart disease April 21, one day before his 66th birthday.

Mr. Curtis, who retired from Monsanto in 1959, had been with the firm since 1915, when he joined the former Merrimac Chemical Co., which was acquired by Monsanto in 1929. He became director of development in 1939, vice-president in 1943, and a director in 1949.

— ★ —

Branigan on Global Trip

George Branigan, vice-president of Ungerer & Co., New York essential oil house, started last month on a globe circling trip. He will visit raw materials producers and suppliers in Hawaii, New Zealand, Australia, The Bourbon Islands, South Africa, Kenya, Ethiopia, Egypt, and Spain.

Ralph A. Hart



John L. Bricker



SCHIMMEL & CO., INC.

announces the removal of office
and laboratories to its newly com-
pleted plant in Newburgh, N. Y.
where expanded modern facilities
are available to serve Schimmel
customers.

**Windsor Highway
Newburgh, New York**

Mailing address:

P. O. Box 2038

Telephone:

JOhn 2-5530



Name Freese and Skaist

John Freese and Morris Skaist were recently advanced to vice-presidents for Chemical Serv-

years. In his new post, he also functions as regional sales director for the north and northeastern areas. With the firm since 1946,

McGrane in Potash Post

The appointment of Frank McGrane as manager of the San Francisco office of American Pot-



John Freese



Morris Skaist



Frank McGrane

ice of Baltimore, Inc., Baltimore, manufacturers of soaps and chemical specialties. Mr. Freese is a senior member of the sales staff and has been with the company for ten

Mr. Skaist has worked in the sales end of the business. In his new post, he takes an active part in expanding the company's sales coverage program.

ash & Chemical Corp., Los Angeles, was announced last month by William M. Clines, general sales manager, western. Mr. McGrane is now responsible for the company's product sales in the San Francisco territory in addition to his former duties as manager of agricultural chemical sales. He joined American Potash in 1955. Richard Reep, sales representative, continues to call on customers from the San Francisco office.

Plan Golf Tourneys

The golf auxiliary of the Chicago Perfumery, Soap and Extract Association, Inc., and Chicago Drug and Chemical Association, Chicago, known as the Par-Busters, have planned five golf tournaments for the 1960 season. The schedule is: Thursday, May 19, Elmhurst C. C., Elmhurst, Ill.; Tuesday, June 21, Thorngate C. C., Deerfield, Ill.; Thursday, July 28, Itasca C. C., Itasca, Ill.; Thursday, Aug. 11, annual swing party, Glen Flora C. C., Waukegan, Ill.; and Thursday, Sept. 15, Calumet C. C., Homewood, Ill. The Par Busters are seeking donations of \$25 from each member company for tournament prizes. Checks should be mailed to Jim McCollough, Big Ben Petroleum Products Co., 624 S. Michigan Ave., Chicago 5.

ber, plastic, and paper industries, was founded in 1910 by Charles A. Wagner and incorporated in 1920. Wagner also supplies specialties to the chemical and feed industries, and represents producers of mineral products.

Charles Hulnick, president of East Coast Soap Corp., Brooklyn, N.Y. (right) presents gift to Irving Petschaft founder and head of Janitorial Supplies Co., Passaic, N.J., to mark 30 years of business relationship between two firms. Since the inception of his business, Mr. Petschaft has been distributor of East Coast's line of specialties.



Wagner Marks 50th Year

Charles A. Wagner Co., Philadelphia, is observing the 50th anniversary of its founding this year. The company, which distributes extender pigments and fillers to the cosmetic, ink, paint, rub-



Basic shampoo materials
which have been approved

SULFOPON WA 1 SULFOPON WA 3

SODIUM LAURYL SULPHATES C₁₂-C₁₆

high purity
excellent detergent and foaming power
high soil suspending power
good water solubility
easily processed



DEHDAG DEUTSCHE HYDRIERWERKE GMBH
Germany Düsseldorf

DISTRIBUTORS IN USA:

Fallek Products Co., Inc. — 165 Broadway — New York 6, N. Y. • A. H. Carnes Co.,
— 75 East Wacker Drive — Chicago 1, Ill. • Ben R. Hendrix Trading Co., Inc. —
409 Cotton Exchange Building — New Orleans 12, La. • R. E. Flatow & Co., Inc.
— 10 Madison Str., P.O.B. 1166 — Oakland 4, Calif.

DISTRIBUTORS IN CANADA:

Canerpa Ltd., — Suite 223, Drummond Building, 1117 St. Catherine Street West
— Montreal • Canerpa Ltd. — 137 Wellington Street West — Toronto • The East
Asiatic Co., (P. Q.) Ltd. — Marine Building — Vancouver 1, B. C.

Now! SOLVAY'S COLD FLAKE PROCESS

... can improve your Caustic Compounds!

If you produce an alkali product containing at least 40% caustic soda, Solvay offers you this interesting new proposal. Consider the advantages of having us compound it for you via the low temperature flake process:

- 1 *You avoid* unpleasant dry-mixing of caustic compounds.
- 2 *You free* mixing equipment so you can handle more non-caustic business.
- 3 *You get* a product superior to hot flaked or ground ones. Unlike the usual flaking operation, heat-sensitive organic materials can be added. Your Solvay®-

compounded alkali will be uniform in composition... non-caking... dustless... readily soluble... stable in transportation and storage.

If you make an industrial cleanser, metal cleaner, washing compound or the like, find out how America's foremost producer of alkalies can work for you. Just mail the coupon.

Sodium Nitrite • Calcium Chloride • Chlorine • Caustic Soda • Caustic Potash
Potassium Carbonate • Sodium Bicarbonate • Chloroform • Methyl Chloride
Soda Ash • Vinyl Chloride • Ammonium Chloride • Methylene Chloride • Carbon
Tetrachloride • Snowflake® Crystals • Monochlorobenzene • Ortho-dichlorobenzene
Para-dichlorobenzene • Ammonium Bicarbonate • Hydrogen Peroxide • Aluminum
Chloride • Cleaning Compounds • Mutual® Chromium Chemicals



SOLVAY PROCESS DIVISION
61 Broadway, New York 6, N. Y.

SOLVAY branch offices and dealers are located in major centers from coast to coast.

SOLVAY PROCESS DIVISION
ALLIED CHEMICAL CORPORATION
61 Broadway, New York 6, N. Y.

81-50A

Please send:

- ☐ Information Service Bulletin—"Advantages of Solvay's Unique Low Temperature Flake Process."
☐ Your representative to discuss my alkali product.

Name _____
Position _____
Company _____
Phone _____
Address _____
City _____ Zone _____ State _____



Because nothing is more important than the purity of your product...

... rely on Conoco white oils and petrolatums to meet your most exacting standards. Conoco's full line of white oils encompasses a range in Saybolt viscosity from 500 to 40. Each white oil is carefully controlled in all stages of manufacturing to assure highest quality, purity and consistent uniformity.

Conoco's premium RAMOL® white mineral oils exceed all U.S.P. and N.F. specifications. For the finest in specialty white oils, many formulators insist on Conoco's KREMOL® or STARLIGHT® products.

Conoco SHEROLATUM® petrolatums for the drug and cosmetic

industry range in color from the purest white to amber.

Continental skill and quality control result in outstanding quality in all grades. Why not investigate the possibilities of these superior Conoco products in your formulations? We'll be glad to supply you with samples.

Continental Oil Company, Petrochemical Department

3 West Forest Avenue, Englewood, New Jersey, U.S.A., LOwell 8-8200

CHICAGO: PRUDENTIAL PLAZA, WHITEHALL 3-0944

NEW ORLEANS: COMMERCE BLDG., JACKSON 2-0884

EUROPEAN SALES OFFICE: P.O. BOX 1207, ROTTERDAM, THE NETHERLANDS



WHITE OILS AND PETROLATUMS

Diversey Income Rises

Diversey Corp., Chicago chemical specialties house, and its subsidiaries abroad reported a rise of earnings and sales in 1959 over the previous year. Net sales were \$16,717,248 in 1959, \$14,409,480 in 1958. Net income (after taxes) rose to \$655,467 from \$524,982. Earnings per common share were \$2.49 in 1959 compared with \$1.99 in 1958.

New Time Chemical Plant

Time Chemical, Inc., manufacturers of custom cleaning compounds and detergents for industrial and institutional use, recently moved into a new plant at 3950 South Karlov Ave., Chicago. The new plant, which went under construction early last year, has 43,000 square feet of floor space and features the latest automatic equipment, enclosed railroad siding and truck loading docks, and bulk storage tanks for raw materials. Space is double that of the company's former headquarters and the new location has room for expansion. Another feature of the plant is a fully equipped and staffed lab-

oratory for research, analyses, product development, quality control, and technical service. Officers of Time Chemical are Seymour Baskin, president, and Irving Bell, vice-president. Don Evans and Steve Demain are sales managers.

Manard Chemical Bought

Manard Chemical Co., New Rochelle, N. Y., manufacturers of chemically impregnated polishing cloths, was acquired recently by Speedry Chemical Products, Inc., Richmond Hill, N. Y., producers of special inks and marking instruments. Manard makes "Chem-Wipe Cloths," which were expected to be marketed under the new tradename of "Speedry Chemical Cloths" early this month after production facilities were relocated at Speedry's plant in Jamaica, N. Y. Manard is being operated as a wholly-owned subsidiary of Speedry Chemical, which plans to expand the line of cloths for auto polishing, and household and industrial use. Formerly about half of the cloths produced by Manard were used for polishing phonograph records.

Oil Process Tax Suspended

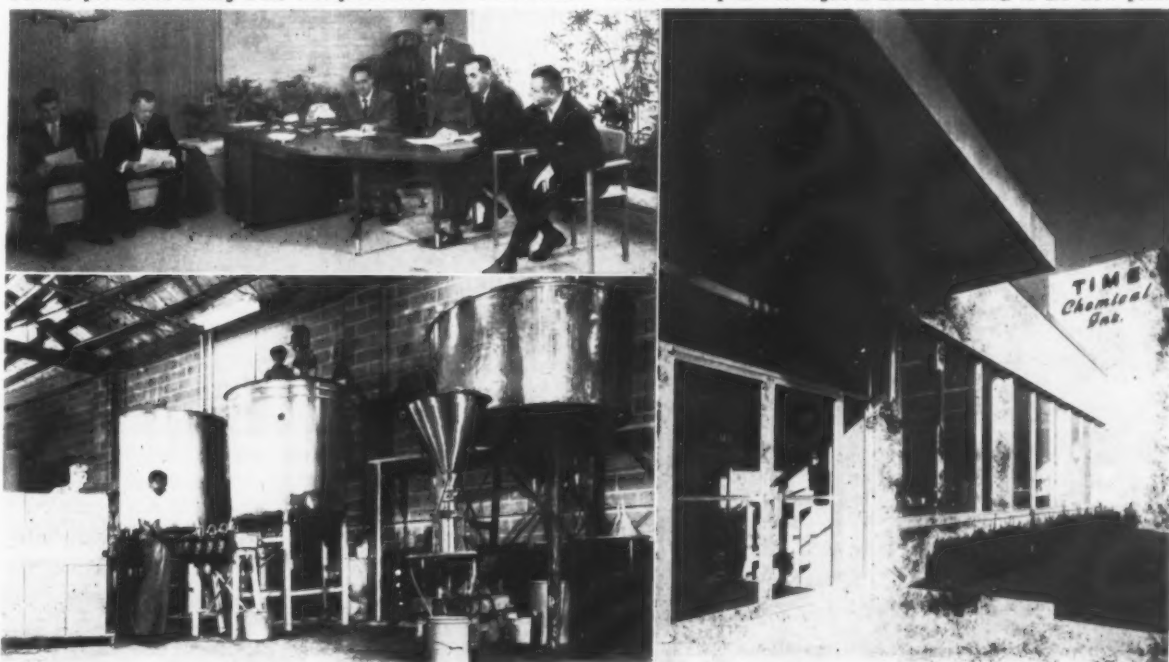
Suspension of processing tax on coconut, palm and palmkernel oils is continued until June 30, 1963 by the President's signing of H.R. 8649 into Public Law 86-432. Existing suspension would have expired June 30, 1960.

H.R. 8649 as originally introduced by Representative Cecil King of California in August 1959 and its companion bill, H.R. 8648, introduced by Representative Eugene Keogh of New York, called for outright repeal of the three cents per pound processing tax on these high lauric content oils. Another bill, H.R. 7561, introduced on June 4, 1959 by Representative John Dingell, Jr., of Michigan, also seeks repeal of the tax.

The Department of Agriculture opposed repeal of the tax in favor of a three year suspension because "there is not available sufficient information to determine whether permanent removal of the processing tax after next June 30—when temporary suspension expires—would be injurious to this department's (USDA's) support program on oilseeds."

At weekly sales meetings, top left, at new plant of Time Chemical, Inc., 3950 S. Karlov Ave., Chicago, are, left to right, Joseph Purtell and William Carroll, sales engineers, Seymour Baskin, president, Irving Bell, vice-president, and Don Evans

and Steve Demain, sales managers. Liquid detergents and metal cleaners are mixed in steel tanks, lower left, with ingredients piped in from bulk holding tanks in an adjacent area of the plant. At right is main entrance of the new plant.



MONA SURFACE ACTIVE AGENTS

Upon request, we will submit suggestions for applications and formulations for all types of cleaners and cosmetic products such as industrial, institutional and household cleaners, car washes, waterless hand cleaners, hair shampoos and bubble baths. You are invited to submit your unsolved problems concerning surface activity. In many cases, we "custom tailor" products or intermediates to suit your specific requirements!

MONA® INDUSTRIES, INC.
PATERSON 17
NEW JERSEY

Davies-Young Names Two

The appointments of Norton Sinert and Dick Wolfe as sales promotional representatives for



Norton Sinert

The Davies-Young Soap Co., Dayton, O., were announced recently by R. H. Gildner, sales manager.

The two representatives are promoting the sales of the firm's line of "Buckeye" products. Mr. Sinert covers Connecticut, Rhode Island,



Dick Wolfe

western Massachusetts, and eastern N. Y. Mr. Wolfe covers southern Illinois and eastern Missouri.

Clough Heads Click

Election of Peter Clough as president of Click Chemical Corp., Mount Vernon, N. Y., and its subsidiary corporation, Click Southern Chemical Corp., was announced during April. Mr. Clough succeeds Millard Fisher, who acquired the firm 10 years ago.

Click's sales of para products for moth and odor control have grown 25 fold since the firm was founded 12 years ago. Manufacturing facilities have been doubled.

Prior to his becoming president Mr. Clough was vice-president in charge of sales and promotion.

— ★ —

FMC Advances Quern

D. Stewart Quern was named last month to the newly created post of senior sales coordinator for industrial chemicals in the southeastern territory for the chemical divisions of Food Machinery and Chemical Corp., New York. Previously southern sales manager for the Becco Chemical Division, Mr. Quern now

Hercules in Australia

Hercules Powder Co., Wilmington, Del., and A. C. Hatrick, Pty., Australian distributor of chemicals will organize a jointly owned Australian company, to be known as Hercules Powder Co. (Australia) Pty., Ltd. The decision was announced March 29 by Henry A. Thouron, general manager of Hercules' international department. Hatrick has represented Hercules for the past 30 years.

The newly formed organization will provide rosin derivatives and other industrial chemicals for sale in Australia and New Zealand. Headquarters will be established in Springvale (Melbourne), Victoria.

— ★ —

Antara Names Distributor

Chemical Sales Co., 1125 Seventh St., Denver 4, Colo., was appointed a distributor recently for Antara Chemicals, a sales division of General Aniline & Film Corp., New York. The firm handles distribution of Antara's line of surfactants, sequestering agents, iodophors, glycols and other products and provides truck delivery in the Denver area.

FOR EVERY OTHER DAY: Guests at the sixth annual men's day luncheon of the Cosmetic Career Women are, left to right: Hon. Lowell B. Mason, former member of the Federal Trade Commission; Dorothy Fey, executive director, U. S. Trademark Association; H. W. Hamilton, executive vice-president, Chemical Specialties Manufacturers Association; Helen L. Booth, secretary, Drug, Chemical, and Allied Trades Association; Hon. Earl W. Kintner, chairman, FTC, guest speaker who discussed "Truth in Cosmetic Advertising"; Gina Kohrman, J. Walter Thompson Co., luncheon chairman; S. L. Mayham, executive vice-president, Toilet Goods Association; and Lee H. Bristol, Sr., chairman, Advertising Council, chairman, Bristol-Meyers.



By every standard... **WEST END** MEASURES UP AS THE
QUALIFIED SUPPLIER OF SODIUM SULFATE

• ACCURATE
PROCESSING
OF ORDERS

• UNIFORMLY
HIGH QUALITY

• ABUNDANT
STORAGE

• FLEXIBLE AND
EFFICIENT
LOADING AND
SHIPPING

• EXTENSIVE
PRODUCTION
CAPACITY

• VAST NATURAL
SOURCE OF
RAW MATERIAL

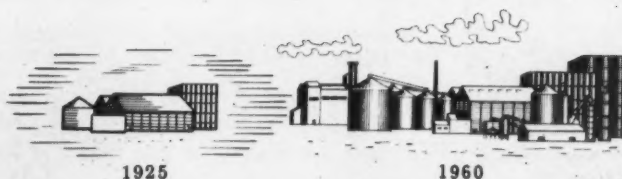
• ALL COMMIT-
MENTS SCRUP-
ULOUSLY MET

• FRIENDLY, HELP-
FUL ATTENTION
TO INDIVIDUAL
NEEDS

• PROMPT,
AUTHORITATIVE
ANSWER TO
EVERY INQUIRY

However you view
your needs, you will
find in West End a
unique coordination of
specialized services,
extensive production
facilities and product
excellence essential
to the prompt, effi-
cient handling of indi-
vidual requirements.

*All commitments
scrupulously met*



For over 35 years, West End has unconditionally
fulfilled every commitment it has ever made.

Expanding along with the chemical processing
industry, West End meets the ever-increasing
normal and unanticipated requirements of
our customers with equal ease and dispatch.



WEST END CHEMICAL COMPANY • DIVISION OF STAUFFER CHEMICAL COMPANY
1956 WEBSTER STREET, OAKLAND 12, CALIF. • PLANT: WESTEND, CALIF.

New POLYOX resins in detergent specialties

eliminate tackiness, give more lubricity

Low concentrations of CARBIDE's new POLYOX resins eliminate tackiness in detergent bars. This benefit gives you an opportunity to use alkyl aryl sulfonates as a base for your formulations. Pleasant skin feel results from the greater lubricity of the lather, exceeding that of soap. Good foaming, foam stability, and less wastage in use are obtained with only two per cent of POLYOX resin, by weight. *Similar advantages* for liquid detergents, shampoos, and toothpastes can be had by the addition of POLYOX resins.

The molecular weights of various grades of POLYOX resins range from several hundred thousand to over six million. They are compatible with detergents . . . electrolytes . . . many organic solvents. You can order

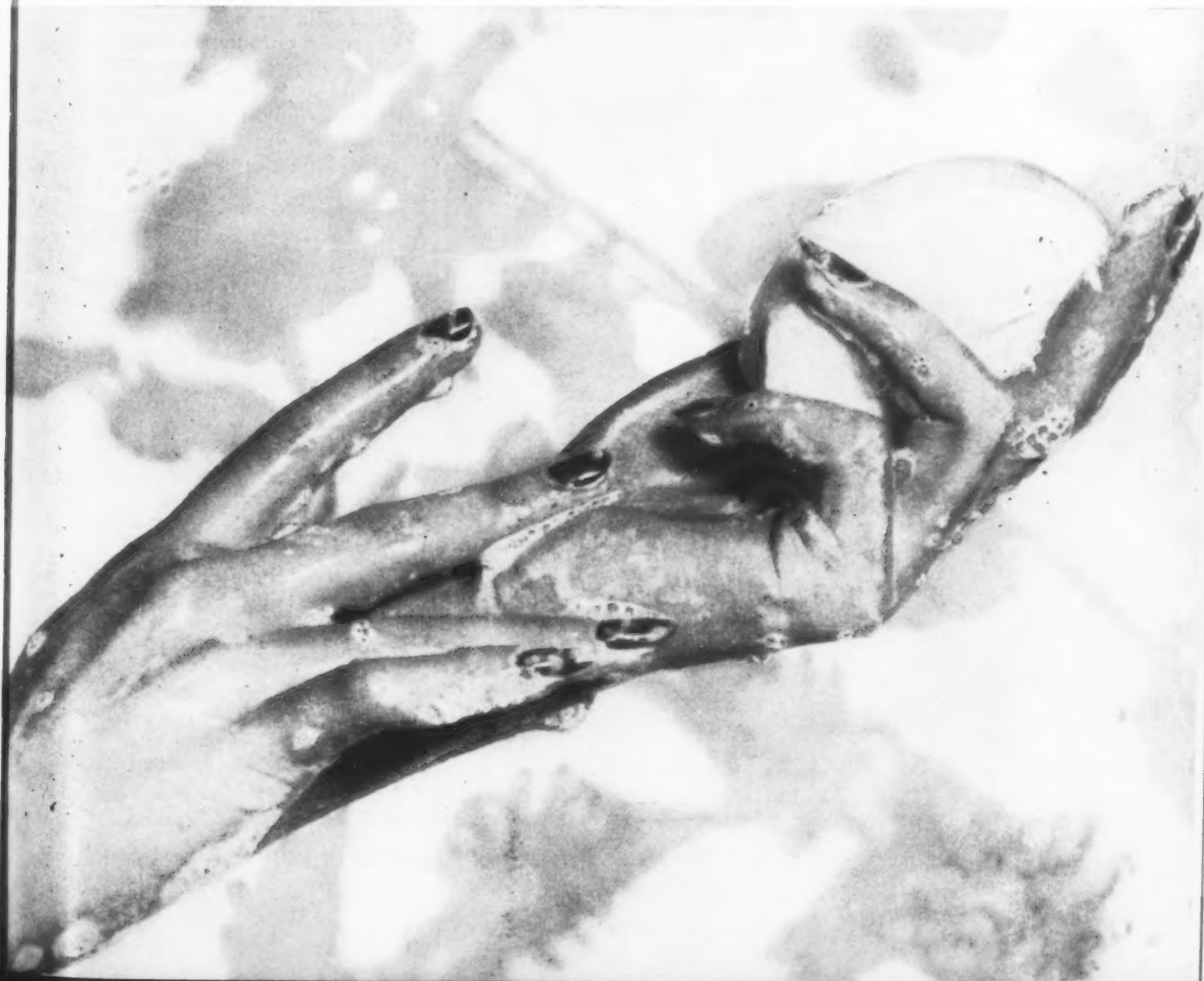
POLYOX resins *now* in truck-load quantities—for commercial production and pilot plant projects—or in smaller quantities for evaluation.

A Technical Representative in any CARBIDE office will explain how your products can be improved with POLYOX resins. You'll find starting formulations, physiological properties, grades, and much more information in a technical bulletin—yours for the asking. Write Dept. H, Union Carbide Chemicals Company, Division of Union Carbide Corporation, 270 Park Avenue, New York 17, N.Y.

**UNION CARBIDE
CHEMICALS COMPANY**



POLYOX and UNION CARBIDE are registered trade marks of Union Carbide Corporation.





Louis Mehalek



E. F. Bless



C. P. Gicas

chemicals on the move... polyethylene glycols

Many applications are served by Poly-G polyethylene glycols. As intermediates, solvents and humectants, they are important in the manufacture of surfactants, resins, pharmaceuticals, textiles, rubber and cellulosic materials.

The molecular weights of the products—lowest 200, highest 1500—indicate the range of properties. You can

choose the Poly-G which meets your requirements most exactly. And you can count on prompt deliveries from distributors' stocks and the plant at Brandenburg, Kentucky.

If your operations require polyethylene glycols of consistent high quality, write today for technical data sheets on the Poly-G series.

Olin Mathieson

CHEMICALS DIVISION, NEW YORK 22, N. Y.



Poly-G® is a trademark

7440-B

ETHYLENE OXIDE • ETHYLENE GLYCOLS • POLYETHYLENE GLYCOLS • PROPYLENE OXIDE • PROPYLENE GLYCOL
POLYPROPYLENE GLYCOLS • ETHANOLAMINES • GLYCOL ETHERS • SURFACTANTS • ETHYLENE DICHLORIDE

Velsicol Expands Staff

Velsicol Chemical Corp., Chicago, announced late last month appointments of Chris P. Gicas and Louis H. Mehalek as chlordane salesmen. Mr. Gicas will cover Florida, Georgia, Alabama, North Carolina, and South Carolina. He was previously associated with Helene Curtis Industries where he handled sales promotion and also served as a territorial sales representative. Mr. Gicas was with A. Stein & Co., Chicago, for two years as a sales representative.

Mr. Mehalek was appointed to the chlordane sales staff to cover Ohio and Michigan. Previously he was engaged in sales and sales promotion work for Stewart Warner Corp. and Chicago 7-Up Bottling Co.

At the same time Velsicol announced the appointment of Emil F. Bless as sales representative for the agricultural chemicals division. He will be responsible for sales and technical service in Alabama, Georgia, and northwest Florida on all agricultural products. The line includes chlordane, heptachlor, endrin, and methyl parathion insecticides and solvents.

— ★ —

Revlon Sales Rise

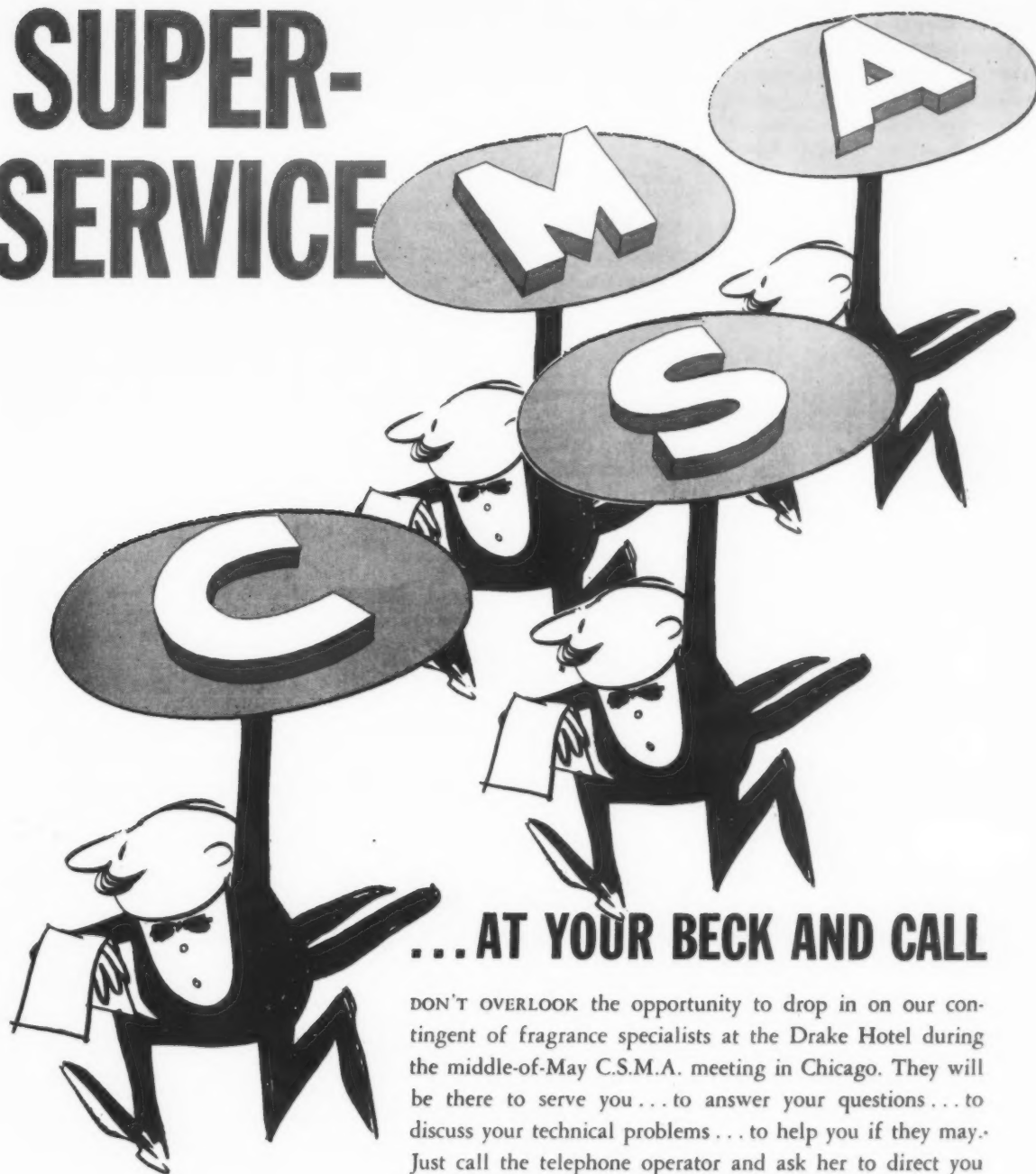
Net sales of Revlon, Inc., New York, and its subsidiaries for 1959 amounted to \$124,939,712 compared with \$110,363,070 in 1958. Net income, including special credits of \$2,759,307 from the company's sale of stock of the Schering Corp., was \$13,416,104 compared with \$9,688,307 in the previous year.

— ★ —

New Polymer Periodical

"Polymer" is the name of a new quarterly publication by Butterworths Scientific Publications, 4 & 5 Bell Yard, London, W.C.2, England. Subtitle of the magazine reads: "The Chemistry, Physics and Technology of High Polymers". Annual subscription including postage is \$15.00 in the United States. The first issue appeared in March 1960.

SUPER-SERVICE



...AT YOUR BECK AND CALL

DON'T OVERLOOK the opportunity to drop in on our contingent of fragrance specialists at the Drake Hotel during the middle-of-May C.S.M.A. meeting in Chicago. They will be there to serve you... to answer your questions... to discuss your technical problems... to help you if they may. Just call the telephone operator and ask her to direct you to the FRITZSCHE Suite where super-service will be at your beck and call. *And whether you have problems or not, join us there for hospitality and a very warm welcome.*



FRITZSCHE BROTHERS, Inc.

76 NINTH AVENUE

NEW YORK 11, N. Y.

Branch Offices and *Stocks: Atlanta, Ga., Boston, Mass., *Chicago, Ill., Cincinnati, Ohio, Greensboro, N. C., *Los Angeles, Cal., Philadelphia, Pa., San Francisco, Cal., St. Louis, Mo., Montreal and *Toronto, Canada; *Mexico, D. F. and *Buenos Aires, Argentina. Factories: Clifton, N. J. and Buenos Aires, Argentina.



New Monsanto Unit

Expanded facilities for the manufacture of liquid sulfur dioxide at Monsanto, Ill., belonging to Monsanto Chemical Co., St. Louis, were to go on stream May 1. The plant is reported to more than double the manufacturing capacity for liquid sulfur dioxide at that point.

Seminar on Resistant Roach

A seminar titled "The Resistant Cockroach" was sponsored recently by the New York Pest Control Association. About 150 people attended the discussion, which summarized latest technical information on incidence, habits, and control of the resistant cockroach. The New York group was host to the Professional Exterminators Association of New York and the New Jersey Pest Control Association. On the seminar panel were: E. J. Hansen, research specialist in the department of entomology, Rutgers University, New



Seminar on "The Resistant Cockroach" was held in New York recently sponsored by the New York Pest Control Association. Seated, left to right: William Farrell, president, Professional Exterminators of New York; Daniel J. Klein, president, NYPCA; and Edward Trenary, president, New Jersey Exterminators Association. Standing, left to right: Ralph Heal, executive secretary, National Pest Control Association; E. J. Hansen, Rutgers University; Jack Benmosche, seminar chairman; and John K. Medoff, Hudson Exterminating Co., West New York, N. J.

Brunswick, N.J.; Ralph Heal, executive secretary, National Pest Control Association, Elizabeth,

N.J.; and John Medoff, Hudson Exterminating Co., West N.Y., N.J.

Mais Où Sont les Neiges d'Antan?

SAPOLIO.



**ELIJAH'S
MANNA**

...who now remembers these famous "snows of yesteryear"?

And your product? Will it, too, take its place in a few seasons among these bits of nostalgia? Why not?

Foster D. Snell, Inc., has built a business in preparing today's products to meet tomorrow's competition. Sometimes all that's needed is a new package, as in the development of the non-rigid vacuum packs for cheeses, bacon, and cold cuts; it may be a change in the way your product looks, smells, performs, as in the case of a new pine-scented, foaming, household ammonia. On the other hand, we are often asked to translate a blue-sky product-idea into a hard, salable reality, as in the case of latex emulsion paints, or the "push-button" shave-lather, or to develop new uses for a raw material as old as civilization, as in the case of our sucrose-ester detergents.

Why Snell? Good question. Some of our clients have chosen us for our 40 years of professional experience; some for our million-dollar facilities; some for our experienced staff of 124; some for the fact that Snell services require no fixed overhead; you pay for what you use, not a penny more! Half of our projects are billed out at less than \$1,000. Best reason of all... but why don't you get in touch with us and find your own reason to use Snell services?

FREE BOOKLETS AVAILABLE:

"How to Develop Successful New Products"
"Services for YOU"
"SERENDIPITY" (SSP)

Foster D. Snell, Inc.

BALTIMORE, N.Y. •
BALTIMORE

WORCESTER
NEW YORK

24 West 15th Street
New York 11, New York



Sommer Heads Monsanto

Charles H. Sommer was elected president of Monsanto Chemical Co., St. Louis, last month, succeeding Charles Allen Thomas who was elected chairman. Edgar M. Queeny, board chairman since 1943, was reelected chairman of the finance committee and continues as a director and member of the executive committee. Mr. Sommer had been executive vice-president since 1959 and for five years previously was a vice-president. He has been with Monsanto since 1934. Before his election as president in 1951, Mr. Thomas had served for four years as executive vice-president. He has been a director since 1942 and chairman of the executive committee since 1949.

Mr. Queeny, son of the late John Francis Queeny who founded the company in 1901, has been with Monsanto since 1919. He was elected president in 1928. A company policy, Mr. Queeny noted, is that all Monsanto presidents should become chairman of the board no later than their 60th birthday. Mr. Thomas is 60.

GSA Awards DDT Contracts

Contracts to supply a total of 13,525,000 pounds of DDT for an antimalarial program in India have been awarded to four American firms by the General Services Administration. The program is sponsored by the International Cooperation Administration.

Total value of the contracts amounts to more than \$3,000,000. They were apportioned as follows: Diamond Alkali Co., Cleveland, 3,500,000 pounds, \$738,480; Olin Mathieson Chemical Corp., Baltimore, 3,875,000 pounds, \$754,650; and Montrose Chemical Co., Newark, N.J., 3,250,000 pounds, \$731,430. The contracts stipulate 75 per cent water dispersible material.

Soil Redeposition

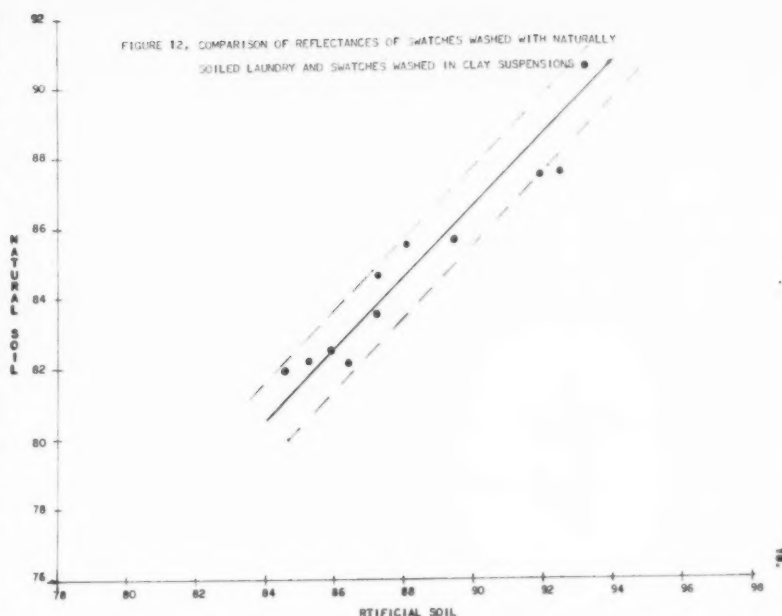
(From Page 76)

and Table IX. The results are shown in Figure II and Table X. A better way of demonstrating the correlation is shown in Figure 12. When one set of data is plotted against the other, the slope of the trend curve is 1, indicating complete correlation to within ± 1 reflectance unit.

This observed correlation is all the more remarkable, considering that the natural soil data shown here were obtained in September, 1958, long before we ran the matching clay data. Thus, we reached into our old laboratory reports, selected a typically ragged redeposition curve for natural soil. Using cloth and detergent from newer batches, we were still able to reproduce this old curve by reproducing the effective soil content using clay.

Discussion

It is not our argument that the data presented here are sufficient to validate the use of clay suspensions as a model soil in redeposition studies. We feel that much more work is needed to do this, but we would like to see this decisive work done by a group within D-12. Two types of partici-



pation will be welcomed: (1) members who will act in an advisory capacity and will assist with the planning of the work, and (2) members who will cooperate in the experimental part of the program.

We shall even welcome the participation of someone as "Devil's Advocate" here. We certainly want to face every rational objection to our approach before making recommendations to the committee.

A New Water-Miscible Germicide

- High potency, broad spectrum bactericide, fungicide and virucide of low toxicity.
- Emulsifying and detergent properties, mild, pleasant odor, wide compatibilities and economical.
- Now available for new and established medicated creams, ointments, shampoos, soaps, detergents, antiseptic and antibiotic formulations, cosmetics and pharmaceuticals.
- Improve your present or planned ethical, proprietary or cosmetic product, with

SURTENOL*

Write for free
copy of our booklet
on SURTENOL:

*Trade Mark

**GUARDIAN
CHEMICAL
CORPORATION**

38-15 30th Street, Long Island City 1, N. Y.



AEROSOLS ARE DIFFERENT!

*and they need
special fragrance formulations*

Aerosols are *not* just conventional products in pressurized packages! The problems of propellant and container compatibility with active and adjunct ingredients demand special knowledge and experience from inception to final consumer acceptance. If your aerosol product . . . personal, industrial or household . . . does the proper job but is lagging behind competition, perhaps you need an individually tailored fragrance. The FRIES & FRIES Aerosol Laboratories, staffed with experts in this rapidly expanding field, are ready to give your product the fragrance that makes the difference between a *winner* and an *also ran*. Contact your FRIES & FRIES representative . . . now!



Cincinnati, 110 E. 70th St.

New York, 418 E. 91st St.

IODINE SANITIZERS

OFFER ALL THESE
ADVANTAGES

A LONG RECORD OF DEPENDABILITY. Iodine is recognized as a most efficient antiseptic and germicide. It is known to be effective against a wide range of organisms. New technology has now resulted in more efficient iodine formulations developed especially for sanitization.

SPECIALIZED PRODUCTS. Iodine sanitizers and detergent-sanitizers are offered by leading manufacturers for treatment of milk, food and beverage utensils and equipment. Also available are iodine disinfectant-cleaners for hospitals, schools, institutions, food and beverage plants, and industrial applications.

EFFECTIVE. Iodine sanitizers are effective in low concentrations . . . economical, too. Their use can contribute to improved public health.

EASY TO TEST. The well-known iodine color is an indication of solution strength. When the color of an iodine sanitizing solution begins to disappear, that is a signal to replenish or replace the solution. There is no reason **ever** to let an iodine solution get too weak to be effective. Test kits are available.

Write us for further information. No obligation, of course.

CHILEAN IODINE
EDUCATIONAL BUREAU,
INC.

Room 2148, 120 Broadway, New York 5, N. Y.

SOAP and CHEMICAL SPECIALTIES

William Diehl Dies

William Diehl, 71, head and founder of William Diehl & Co., New York supplier of waxes, shellac, and gums, died April 9. Mr. Diehl had operated the firm bearing his name since 1943. Previously he had been an officer of Adolph Hurst & Co. which he joined in 1928.

Walter H. Diehl will succeed his father William Diehl as head of the firm.

New Boyle-Midway Unit

Formation of an institutional and industrial sales division was announced May 3 by Bernard Gould, president of Boyle-Midway Division of American Home Products Corp. The new unit will be headed by Robert L. Kob, formerly of B. T. Babbitt, Inc., who has been appointed vice-president, industrial and institutional sales for Boyle-Midway.

The new division will introduce to sanitary supply jobbers its line of branded chemical specialties including "Aerowax," "Sani-Flush," "Old English" polishing waxes and oils, "Wizard" deodorizers, "Easy-Off" oven cleaner and window spray, "Black Flag" disinfectants and insecticides as well as a full line of mops and wax applying equipment. Products will be designed and produced, tailored to the needs of the sanitary supply jobber, Boyle-Midway says.

Mr. Kob joined Boyle-Midway late last month after six years with Babbitt. His earlier associa-

Robert L. Kob



tions include 10 years with the institutional division of Standard Brands. Mr. Kob has been active in the National Sanitary Supply Association. He will be located at Boyle-Midway's main offices in New York City.

Manufacturing facilities of Boyle-Midway are in Cranford, N. J.; Chicago; Chamblee, Ga.; Canton, O.; Brooklyn, N. Y.; and Los Angeles, Calif.

Polyvinyl in Expansion

An expansion program which added 5,000 square feet of floor space to its laboratory and administrative facilities was completed last month by Polyvinyl Chemicals, Inc., Peabody, Mass. A new polymer pilot plant is included in the expansion. The firm also expanded its polymer emulsion plant capacity by 20 million pounds per year.

chemicals on the move... surfactants

Get the surfactant performance you need with the Poly-Tergent series. These nonionic surface active agents are effective dispersants, emulsifiers, wetting agents and detergents. They offer unusual solubility values and outstanding results in the presence of acids, alkalis and polyvalent metallic salts.

The Poly-Tergent surfactants have proved effective in scouring, desizing, bleaching, dyeing and printing operations in the textile industry. In pulp and

paper they are used for rewetting, de-inking, pitch control and felt washing. Other applications are in water-base paints, pesticide formulation, metal cleaning and petroleum demulsification.

Eight Poly-Tergent surfactants are produced in three different compositions. LCL shipments in drums can be made from distributor stocks; tank car quantities from the plant. Write for samples and technical data sheets.

Poly-Tergent® is a trademark



Olin Mathieson

CHEMICALS DIVISION, NEW YORK 22, N. Y.



ETHYLENE OXIDE • ETHYLENE GLYCOLS • POLYETHYLENE GLYCOLS • PROPYLENE OXIDE • PROPYLENE GLYCOLS
POLYPROPYLENE GLYCOLS • ETHANOLAMINES • GLYCOL ETHERS • SURFACTANTS • ETHYLENE DICHLORIDE

Fragrance Memo



*Benzalmonal**
Superior to Benzaldehyde
in fine soaps...
A straight chemical.
Stable, lasting
fragrance, comes much
closer to the true
bitter almond odor.

Noville
 ESSENTIAL OIL COMPANY
 INC.
 NORTH BERGEN, N. J.

* produced by
 NICKSTADT-MOELLER, INC.
 Ridgely, N. J.
 AN ASSOCIATED COMPANY

Aerosol Patents

(From Page 211)

material freely overlying substantially the entire exterior surface of the bottle, and being bonded only to said organic adhesive, said sheath being elastically expandable where freely overlying said bottle by said pressure when released upon explosive fracture of the bottle, said sheath having tensile and tear strengths to withstand the initial explosive force and when expanded having tensile and tear strengths operable within the elastic limit of said sheath to confine and retain said pressure and the fracture fragments of the bottle, and said sheath having at least one vent therein operable upon expansion of said sheath to gradually exhaust said pressure therefrom while still retaining therein the fracture fragments of said bottle.

No. 2,908,297. Liquid Sprayers, patented by Alvar Carlsson, Stockholm, Sweden. Described is a refillable container adapted to be filled with a liquid fluid under gas pressure, said container having an opening in one wall only thereof through which the fluid is introduced into the container, the gas pressure on the fluid being thereafter generated, and a combined, releasable closure and valve assembly for closing said wall opening subsequent to filling the container and

thereafter dispensing the fluid, said assembly including a closure member, a dispensing valve mounted centrally on said closure member, said closure member including means of forming a chamber below and communicating with the path of liquid flow through said valve, a tube extending from said chamber to the bottom of said container, said closure member also including a peripheral flange, and a sealing ring intermediate said flange and the marginal portion of said wall opening, said sealing ring engaging the upper side of said flange at its underside and engaging the underside of the marginal portion of said wall opening at its upper side, said flange being sealed with respect to said wall opening only being acted upon by the gas pressure created in the filled container to establish an outward force on said flange in the direction of said sealing ring and said marginal portion of said wall opening.

New Fire Retardant

A new flame-proofing chemical for treatment of textiles containing acetate rayon fibres was introduced recently by Flamort Chemical Co., San Francisco. Called "Flamort-U", the product is reported not to affect the tensile strength of material to which it is applied.

5 times more sensitive new detergent meter!

COMPLETE WITH MEASURING ELECTRODES AND INSTALLATION INSTRUCTIONS



Write, wire or
 phone for
 brochure & prices!

The TAB "500" offers
 "across-the-room"
 readability never before

possible! Makes control of detergent materials easier and far less
 costly! Insures 5 times better performance! Simple, reliable and
 inexpensive... The TAB "500" saves dollars and cents!

Manufactured by 424 MADISON AVENUE • NEW YORK 17 • PLAZA 3-6960

ALMO LABORATORIES

Independent Expands

Independent Chemical Corp., Brooklyn, N.Y., distributors of "Versene" sequestrants and other industrial and fine chemicals, has added two warehouses to its facilities, it was announced late last month by Benjamin Spielman, president. Located at Thomasville, N. C., and Fall River, Mass., the warehouses will facilitate service to the South and New England.

— ★ —

Michigan Names Sparks

The appointment of Thomas B. Sparks as product sales manager of industrial chemicals for Michigan Chemical Corp., St. Louis, Mich., was announced recently by George I. Innes, director of sales. Mr. Sparks joined the company in 1957 as a salesman after serving with Merck & Co., Rahway, N. J. He now is in charge of sales of bromine, bromine derivatives, non-bromine fine chemicals, and pharmaceutical derivatives.

Dry Cleaning

(From Page 72)

Cationic — Titrate by a method similar to that for anionic detergents using an anionic solution for Solution #3 and bromphenol blue for Solution #2. (12) See Appendix A.

12. Efficiency

There is, as with all detergents, a need for evaluating efficiency but there is no one method known to the author at this time which gives satisfactory results from a standpoint of reproducibility and correlation to actual drycleaning.

The first eleven stipulations answer the drycleaner's most important question: Is the detergent in hand a product which can be used properly and safely without deleterious effects on equipment and on garments which are being processed.

When a means is found of evaluating the twelfth requirement, efficiency, he will know also

whether the detergent cleans and how well it does the job.

Appendix A

Field Test Method for Concentration of Anionic Drycleaning Detergents in Drycleaning Solvents

Equipment:—

1. Solution #1—Chloroform
2. Solution #2—An aqueous solution of methylene blue prepared by mixing 1.2% sulfuric acid, 5% sodium sulfate, and 0.003% methylene blue in water.
3. Solution #3—An aqueous solution of cetyl pyridinium bromide at a concentration of 2.5 g/liter.
4. A 2 ounce bottle marked off at the 25 cc and 50 cc points.
5. A one dram vial.
6. Two 100 ml graduated cylinders.
7. 200 ml of clean drycleaning solvent, the same as that in which the detergent is normally dissolved.
8. 25 ml of the detergent to be tested.
9. 5 ml of the unknown.

Procedure—

1. Standard Solution
 - A. To a 100 ml graduated cylinder add 90 ml of clean drycleaning solvent and then 10 ml of the pure drycleaning detergent.
 - B. Mix thoroughly to form a 10% solution.
 - C. To another 100 ml graduated cylinder add 90 ml of clean dry-

Certified
SHELLAC

Call, Write, or Wire Collect for
FREE WORKING SAMPLES
and price data

BRADSHAW-PRAEGER & CO.

3248 West 47th Place Chicago 32, Illinois
LAfayette 3-2050

**Refined
Wax Free**

**Certified Shellac
Assures
Uniform Results**

- Longer shelf life
- Greater scuff resistance
- Higher gloss
- Better leveling
- Faster solubility

THIS COUPON SOLVES YOUR NEXT COLOR PROBLEM!

PYLAM Sends you **FREE SAMPLES**
of any color your product needs!



Clip and Mail
Coupon Today to:
PYLAM PRODUCTS
COMPANY, INC.
799 Greenwich St.
New York 14, N.Y.
Please send me
FREE SAMPLES
and **PRICE LIST**
for the following
colors:

Name Solubility:
Colors water, alcohol,
or oil

CERTIFIED: _____

TECHNICAL: _____

LIQUID: _____

Product to be colored: _____

Please match color of enclosed sample.

NAME & TITLE

COMPANY

ADDRESS

CITY & STATE

HERE'S WHY
YOU'LL PREFER
PYLAM
FOR COLOR:



Widest choice of colors and dyes •
less-than-draw-the-order, a Pylam
specialty • Color-matching lab service
free • Guaranteed quality • Faster
delivery • 43 years experience

PYLAM

PRODUCTS COMPANY, INC.
Manufacturer of Colors
799 Greenwich St., New York 14, N.Y.
Phone: CHelsea 3-1687

cleaning solvent and then 10 ml
of the 10% solution obtained
above.

D. Mix thoroughly to form a 1%
solution of drycleaning detergent
in solvent.

E. A new standard 1% solution
should be prepared only for each
new detergent tested.

2. Testing

A. Take a sample of the charge sol-
vent you want to test by filling the
glass vial brim full. Pour this
into the two ounce bottle.

B. To the sample in the 2. oz. bottle,
add Solution No. 1 until the total
volume reaches the 25 cc line
etched into the bottle and Solution
No. 2 to the 50 cc line.

C. Hold a finger over the top of the
bottle and shake the mixture vig-
orously ten times.

D. Fill the graduate up to the 10 cc
mark with Solution No. 3.

E. Pour 1 cc of Solution No. 3 from
the graduate into the two ounce
bottle.

F. Hold a finger over the top of the
bottle and again shake it vig-
orously ten times.

G. Allow the liquid in the bottle to
stand for a few moments.

H. If a dark blue layer forms at the
bottom of the bottle, you have not
reached the end point. Repeat
steps E, F, and G again.

I. If a light blue layer forms at the
bottom of the bottle, you have
reached the end point.

J. Compare the test of the standard
1% solution and unknown solution
to arrive at the concentration of
detergent in the unknown.

References

- (1) ASTM Standards, V. 10, 1958, D-459-58T, P. 922
- (2) Fulton, G. P. and Martin, A. R., *Drycleaning Technology and Theory*, Interscience, New York, 1958, p. 175
- (3) Dixo Company, Inc., unpublished data
- (4) Ibid.
- (5) ASTM Standards, V. 10, 1958, C-123-58, Appendix V, p. 70
- (6) Dixo Company, Inc., unpublished data
- (7) Ibid.
- (8) ASTM Standards, V. 7, 1958, D 130-56, p. 85
- (9) Dixo Company, Inc., unpublished data
- (10) ASTM Standards, Supplement to V. 10, 1959, p. 222
- (11) Fulton, G. P. and Martin, A. R., *Drycleaning Technology and Theory*, Interscience, New York, 1958, p. 159
- (12) Barr, T., Oliver, J., and Stubbings, W. V., "The Determination of Surface-Active Agents in Solution," *J. Soc. Chem. Ind. (London)*, V. 67, pp. 45-8 (1948)
- (13) Harris, J. C., and Bernstein, R., "Bibliographical Abstracts of Methods of Analysis of Synthetic Detergents," ASTM Special Technical Publication 150-A (1956)



ASK THE MEN WHO KNOW

MM&R chemists and perfumers,
under the direction of Arthur H.
Downey, vice president in charge
of research and technology (left
in photograph), have helped to
solve some of the most difficult
perfume problems of manufac-
turers of chemical specialties.

If you have a perfume or re-odor-
izing problem, we suggest that
you discuss it with our technical
staff, in complete confidence. They
will be glad to help you to
increase the sales appeal of
your products with distinctive fra-
grances that capture attention in
today's competitive market.

There is no cost or obligation for
this service.



MAGNUS, MABÉE & REYNARD, INC.

Essential Oils and Basic Perfume Oils
16 Desbrosses St., New York 13, N. Y.
221 North LaSalle St., Chicago 1, Ill.

professional directory

A. EDISON BADERTSCHER

Graduate Entomologist

Consulting — Labels — Products

Thirty years experience in preparation of labels and compounding household, industrial, and garden insecticides, pet products, insect repellents, and soluble plant foods.

Science Center Building
1113 N. Rolling Road
Baltimore 28, Md.
Phone: Ridgeway 7-1044

'LAB TO LABEL'

Service, Facilities, Experience
in SCREENING and DEVELOPMENT of
INDUSTRIAL AGRICULTURAL PESTICIDES:

NEMATOCIDES-INSECTICIDES
FUNGICIDES

BACTERICIDES-HERBICIDES

Ask for Brochure

BIO-SEARCH & DEVELOPMENT
COMPANY

2019 W 71 Terr. Kansas City 15, Mo.
Dr. J. B. Skaptason, Pres.

ALVIN J. COX, Ph.D.

Chemical Engineer and Chemist
(Formerly Director of Science, Government of
the Philippine Islands; Retired Chief, Bureau of
Chemistry, State of California Department of
Agriculture.)

ADVISOR ON AGRICULTURAL
CHEMICAL PROBLEMS AND
INVESTIGATIONS

Consultant in reference to spray injury and damage claims including imports of fruits and nuts, formulas, labelling, advertising and compliance with law.

1118 EMERSON STREET
PALO ALTO, CALIFORNIA

Hudson Laboratories, Inc.

Consulting

Chemists and Bacteriologists

117 W. 13th St., New York 11, N. Y.

Bacteriology

Chemistry

Toxicology

Dermatology

Testing Analysis Formulation Research
Disinfectants Antiseptics Sanitizers
Antiseptic and Deodorant Soaps

Advice on labeling and advertising claims

Roger F. Latham, M.D.
Director

Rebecca L. Shapiro, M.S.
Chief Bacteriologist

INDUSTRIAL BIOLOGY LABORATORIES, INC.

**Toxicology
Biology
Chemistry**

For The

Food, Drug, Cosmetic
& Chemical Industries

P. O. Box 7346, Phila. 1, Pa.
Evergreen 6-6430

LABORATORY SERVICES for the FOOD and DRUG INDUSTRIES



DRUG EVALUATION,
FOOD ADDITIVE STUDIES,
CHEMICAL ASSAYS,
BIOLOGICAL ASSAYS,
CLINICAL STUDIES,
RESEARCH

LaWALL & HARRISON

(E. 10th St. Walnut St. Philadelphia 3, Pa. LO 3 512)

LEBERCO LABORATORIES

*Consulting Pharmacologists
and Bacteriologists*

ANTI-BIOTIC AND FUNGICIDAL ASSAYS,
TOXICITY TESTING, CHRONIC AND
ACUTE, EYE AND SKIN IRRITATION
STUDIES, HAND WASHING STUDIES,
CLINICAL STUDIES,
PATCH TESTING



123 Hawthorne Street
Roselle Park, N. J.

W. W. LEWERS, Ph.D.

Consulting Chemist and
Chemical Engineer

All phases of the Chemical
Specialty industry—
Plant design, product development.
Research programs planned and directed.

Specializing in emulsions, resins,
waxes, polishes, cleaners, latex paints.

17 W. 60th St., New York 23, N. Y.
Circle 6-4549

JOHN W. McCUTCHEON

Incorporated

475 Fifth Avenue, New York 17
MU. 3-3421

Consulting Chemists &
Chemical Engineers

Specializing in
**oils, fats, soaps
synthetic detergents
and glycerine**

Laboratory: 236 Mt. Kemble Ave.,
P. O. Box 223
Morristown, New Jersey

DONALD PRICE, Ph.D.

Consulting Chemist

specializing in

**Surface-active agents,
detergents,
cleaning materials,
oils and fats
product development**

123 E. 92nd St. New York 28, N. Y.
AT 9-9086

Lab. 17 W. 60th St., New York 23
CI 6-4549

— COMPLETE — LABORATORY SERVICE

Small and Large Animal Research,
Toxicity Tests, Human Patch Tests.

Bacteriology—Screening, Testing.
Research—Bactericides, Fungicides

Chemistry—Visible, Ultraviolet, Infrared
Spectroscopy, Chromatography.

New Products. Pilot Plant.

Write for Brochure

SCIENTIFIC ASSOCIATES
3755 FOREST PARK AVE.
ST. LOUIS 8, MO. JE. 1-5922

RESEARCH AND DEVELOPMENT

Chemical and Engineering Consultants

Toxicology, Engineering,
Analyses, Market Research
Soap & Syndet Evaluations.
Chemical Specialties

Send for free brochure:
"How to Develop Special
Chemical Products."

SNELL

Foster D. Snell, Inc.
29 W. 15th St., N.Y. 11, N.Y.

CUT COST & TIME

For PLANT MODERNIZATION and EXPANSION

you can rely on **NEWMAN'S**

80

years of experience
in new, used and reconditioned
SOAP and CHEMICAL EQUIPMENT

A **COMPLETE LINE** of equipment for **SOAP, DETERGENT & CHEMICAL SPECIALTIES** including, Packaging, Wrappers, Liquid Paste & Powder Fillers, Mixers, Boilers, Stainless Steel Tanks & Jacketed Kettles, Cappers, Labelers, Pulverizers, Filters, Dryers, etc.

Members of the C.S.M.A. and friends are cordially invited to visit our New warehouse

3601 So. Iron Street

Call, Write or Wire for Additional Information

NEWMAN

TALLOW and
SOAP MACHINERY

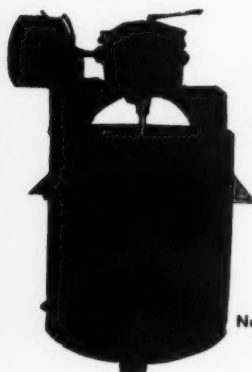
Company

3601 S. Iron Street

CHICAGO 9, ILLINOIS

YArds 7-3665

WE BUY & SELL

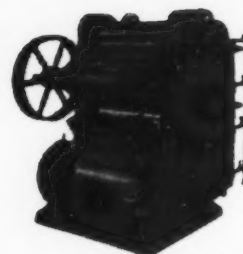


Single or double arm mixers, jacketed or un-jacketed, all sizes.

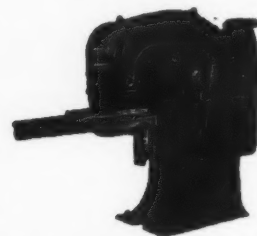


AUTOMATIC POWER CUTTING TABLES

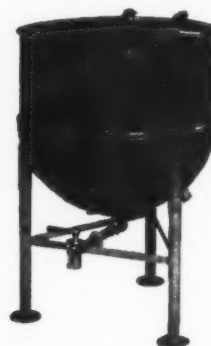
Newman's Steel Steam Jacketed SOAP CRUTCHERS.
BRAND NEW. Sizes 1,000 to 10,000 lbs.



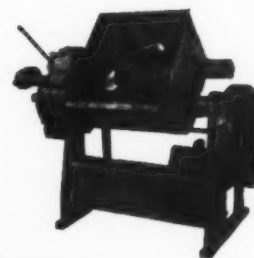
TOILET SOAP MILLS
3 Roll - 4 Roll - 5 Roll
STEEL and Granite Rolls



JONES Horizontal Type AUTOMATIC
combination laundry and toilet soap
presses. Single or Double Kick.



Steam jacketed stainless steel kettles,
all sizes, with or without agitation.



SOAP and CHEMICAL SPECIALTIES

Stillwell and Gladding, Inc.
ANALYTICAL & CONSULTING CHEMISTS
Over 80 Years
SPECIALIZING IN ANALYSIS

of
Rottenone Bearing Materials, Pyrethrum
Flowers and Extracts, Soaps, Detergents,
Insecticides, Waxes and Chemicals.

130 Cedar Street
New York 6, N. Y.
RE 2-4033

TESTFABRICS, Inc.
55 Vandam Street
New York 13, N. Y.

Cotton Soil Test Cloth #26,
Bureau of Ships Spec. 51-S-47
(INT). Same soil printed on
wool, silk and all synthetic
fibers. Cotton skeins for Draves
Wetting test.

Ask for catalogue.

LABORATORY SERVICES

Peet-Grady and C.S.M.A. Aerosol Tests
Biological evaluation and screening of insecticides,
fungicides, herbicides and bactericides
Antibiotic assays — Phenol Coefficients
Toxicity Studies
Food Aerosol Testing
Other Biological, Chemical and
Microbiological Services
Project Research and Consultation



Write for price schedule

**WISCONSIN ALUMNI
RESEARCH FOUNDATION**

P. O. Box 2217,
Madison 1, Wis.

CLASSIFIED ADVERTISING

RATES

Situations Wanted
5¢ per word — \$1.00 minimum

Other Classified
10¢ per word — \$2.00 minimum

BOLD FACE RULED BOX
\$10.00 per column inch
2 inch minimum

Address Box numbers care of
Soap & Chemical Specialties
254 W. 31st St., New York 1, N. Y.

Factory Supt. Wanted: Old
established soap company in New
York City area wants factory su-
perintendent. Man must be experi-
enced in making milled soap, cold
made soap and in glycerine extrac-
tion. Address Box 455, c/o Soap.

Chemical Salesman Wanted:
We have opening for a hardwork-
ing, experienced salesman to call
on distributors of chemical special-
ties and aerosols in the Southeast-
ern states. Earnings far above aver-

age, established trade, good draw-
ing account including expenses
plus commission. Must be willing
to remain away from home two
weeks per month. All replies will
be answered and kept confidential.
We are the leading manufacturer
in our field. Address Box 443, c/o
Soap.

Salesman or Mfrs. Agents: Ma-
jor private label manufacturer of
floor finishing materials wants
salesmen or manufacturers' repre-
sentatives for several openings. Ad-
dress Box 427, c/o Soap.

(Turn to Page 265)

Positions Open

Wanted: Jobbers and distribu-
tors for miniature guest soaps,
wrapped and unwrapped. Write
for samples and prices to box 442,
c/o Soap.

Chemist Wanted: Excellent
working conditions and other bene-
fits. Future for right party. Write
Hillyard Chemical Co., St. Joseph
1, Missouri.

detergent chemist

Minimum 3 years' experience in
formulating household and in-
dustrial detergents.

DUTIES INCLUDE: Technical service and development
... evaluation and formulation of surface active
materials of all chemical types.

Send resume to Mr. Dingman, c/o

NOPCO Chemical Co.

60 Park Place, Newark, New Jersey

LEESEN COLORS will increase your sales of ...

- Optical Bleaches and Brighteners
- Glass and Window Spray Cleaners
- Waxes — Deodorants (Para Blocks and Crystals) — Moth Cakes and Crystals)
- Waterless Hand Cleaners, Automotive, Metal, Furniture and Floor Polishes

- Disinfectants — Insecticides — Deodorants — Metal and Hand Cleaners and Degreasing Agents
- Color Sprays and Upholstery Cleaners
- Sweeping Compounds
- Ammonia (Household) and Quaternary Products

- Gasoline and Diesel Oils
- Tracer and Leak Detectors
- Powdered Detergents and Sanitizers
- Bowl Cleaners • Anti-Freeze
- Liquid Detergents • Soap
- Battery Additives

Send for price lists giving color formulation data and shades

We have a complete line of Food, Drug and Cosmetic
Certified Colors, also Chlorophyll and Carotene

LEESEN

COLOR AND CHEMICAL COMPANY, INC.

103 LAFAYETTE STREET

NEW YORK 13, N. Y.

TEL: WORTH 6-0330

from
**Penn-
Drake[®]**

WHITE OILS

A complete range of U.S.P., N.F. and Technical grades—with regular or custom properties

PETROLATUMS

All grades and colors from Super White to Dark Green—refined from 100% Pennsylvania Crude

SULFONATES

Sodium Sulfonates, Barium Sulfonates, Calcium Sulfonates—with properties to fit your particular needs

ODORLESS SOLVENTS

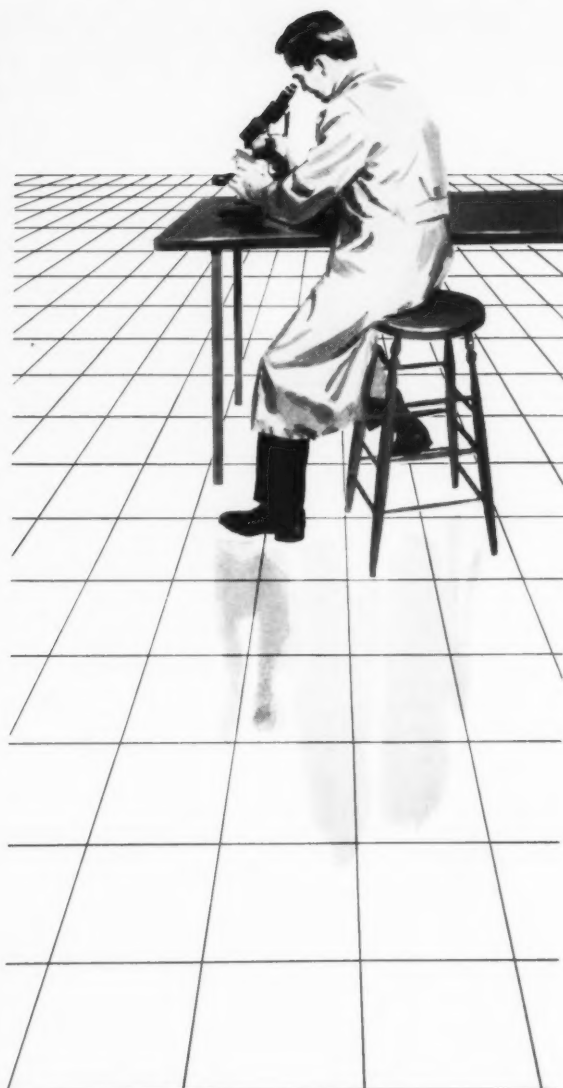
2251 Oil—a 100% volatile, highly purified hydrocarbon distillate

Super-Sol—a fast evaporating, highly refined hydrocarbon



**PENNSYLVANIA
REFINING COMPANY**
BUTLER 34, PA.

Branches: Cleveland, Ohio and Edgewater, N. J.
Representatives in all Principal Cities



TESTS WILL CONVINCE YOU BEYOND DOUBT THAT

VAC-DRY SHELLAC

WILL GIVE YOUR FLOOR WAX
LIGHTEST COLORED FILM
AS WELL AS HIGHER GLOSS
LONGER WEAR • IMPROVED ANTI-SLIP
GOOD LEVELING

Refined Vac-Dry is not "just another wax-free shellac." It is manufactured especially to meet the requirements of floor wax formulae. Its light color in solution makes it ideal for use in light-colored polymer formulations. Vac-Dry has low acid value, and dissolves with less alkali for greater water resistance.

For full information and test samples write:



WILLIAM ZINSSER & CO., INC.

office and factories at

516 West 59th Street, New York 19, New York
319 North Western Avenue, Chicago 12, Illinois

SOAP and CHEMICAL SPECIALTIES

Positions Open

Technical Sales Rep. — Cover Eastern territory. Manufacturer of surfactants and germicides. Must be experienced and have a knowledge of quaternary ammonium compounds. Salary, expenses and car. Address Box 441, c/o Soap.

Salesman Wanted: By well known manufacturer of highly specialized surface active agents. Some chemical background and experience essential. Applicant must be free to travel nationally. State qualifications and salary expected. Enclose snapshot. Address Box 444, c/o Soap.

Wanted Mfrs. Agents: To sell our low cost amines, glycols, solvents, polyethylene waxes and glycol ethers, to manufacturers of polishes, detergents, industrial cleaners, soluble oils, buffing compounds, emulsifiers, soaps and textile chemicals. Our products are laboratory controlled, uniform and continually available. Hot leads and active accounts turned over to sales producers. Aggressive representation especially needed in Eastern and Southern territories. All replies held in confidence. Address Box 445, c/o Soap.

Representative Wanted: Sales representative for middle Atlantic states to call on pest control operators and formulators for established East Coast house. Replies treated confidentially. Address Box 456, c/o Soap.

District Sales Mgr. Wanted: Substantial manufacturer of sanitary maintenance products has lucrative offer for a top quality salesman or sales manager in Indiana, Ohio, Michigan and Illinois. Products are backed by a quarter of a century of experience in the market and are distributed by top line jobbers and direct to industrial accounts. Must be experienced in this field. Travel is necessary to develop and train men. Send complete resume and picture to Box 457, c/o Soap.

Chemist Wanted: Capable experienced chemist wanted by a 30 year old mid-western company, must have complete background and knowledge of disinfectants, solvents, floor waxes and detergents for the institutional and industrial field. Submit full resume. Liberal salary, plus profit sharing arrangements. Give full information in first letter. Replies confidential. Address Box 458, c/o Soap.

General Sales Manager: Hard hitting, aggressive, capable of hiring 25 to 50 salesman and training same in field. Must have full sanitary maintenance background. Minimum of 5 years. Tremendous opportunity with established 30 year old company who wishes to expand their sales organization. Must relocate. Liberal salary, plus profit sharing arrangements, fringe benefits. Give full information in first letter. Address Box 459, c/o Soap.

Situations Wanted

Soapmaker Available: Over 20 years experience in kettle room operation, boiling laundry and toilet soaps. Address Box 449, c/o Soap.

Available: Industrial sales manager, general or regional. Solid background successful marketing through janitorial supply jobbers, mfr. agents, and direct. Strong personal producer on major accounts, recruiting, training for volume and lasting associations. New York area resident. Address Box 446, c/o Soap.

Organic Chemist: Dr. in organic chemistry, specialized in soaps, vegetable oils, fats, fatty acids, and derivatives. 12 years experience,—research, product development and formulation. Desires responsible position. Address Box 447, c/o Soap.

Chemist: Executive, expert in formulations and manufacture of sanitary maintenance chemicals. Experienced in handling men in factory and on large maintenance jobs. Address Box 448, c/o Soap.

Sales: Capable executive well versified in all aspects of the janitor supply business, now located in Florida, seeking a new contact preferably in sales, either in Fla., on the lower east coast, or a return north to New York state, New England, New Jersey or Pa. Write Box 438, c/o Soap.

(Continued on Page 267)

MODERN REBUILT AND GUARANTEED PROCESS MACHINERY

UNION
Rebuilt
Machinery
Established 1912

Available At Tremendous Savings

Pneumatic Scale, Cartoning Unit consisting of Automatic Carton Feeder, Bottom Sealer, Top Sealer and Wax Liners. Both low and high speed.
Pneumatic Scale Tite Wrap Machine.
Package Machinery FA, FA2, FA3, F10 and F10J Wrappers.
Stokes & Smith Transwraps—Model A and B
Hudson Sharp Campbell Automatic Cellophane Wrapper.
Package Machinery Models S and S-2 Soap Wrappers.
Standard Knapp 429, A-B-C, Ferguson Carton Sealers.

Tell Us All Your Machinery Requirements
Complete Details and Quotations Available On Request

INSPECTION INVITED . . . IMMEDIATE DELIVERIES

Werner & Pfleiderer 3,000 gal. and 3,500 gal. Jacketed Double Arm Mixers.
Mikro 4TH, 3TH, 3W, 2TH, 1SH Pulverizers.
Resina LC Automatic, Pneumatic and Capem 4-Head Cappers.
Burt AU-611, CRCO and Standard Knapp Wraparound Labelers.
Baker Perkins 50 gal., 100 gal. Steel, Stainless Steel S. J. Mixers.
J. H. Day 450-650 gal. Steam Jacketed Jumbo Mixers.
H. K. Porter 650 gal. S. J. Double Spiral Mixers.
R. A. Jones E Automatic and Houchin Semi-Automatic Soap Presses.
J. H. Day and Robinson 50 up to 10,000 lb. Dry Powder Mixers.
Stokes 90D Automatic Tube Filler and Closer.
Stokes and Smith G1, G2, HG84, HG88 Auger Powder Fillers.
Pony M, TO, Ermold, World Semi and Automatic Labelers.

UNION STANDARD EQUIPMENT COMPANY

318-322 Lafayette St., New York 12, N. Y. Phone: Canal 6-5334

DAWE'S

a dependable source for

SODIUM GLUCONATE and GLUCONIC ACID

Promptly available in any quantity.

Warehouse stocks across the country.

Dawe's high quality is assured.

Write for technical data and samples.

**DAWE'S
LABORATORIES, INC.**

4800 South Richmond Street

Chicago 32, Illinois

Dawe's



FORMULATE
MANUFACTURE
PACKAGE

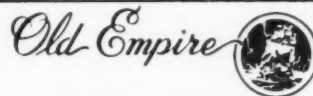
aerosol packaging

AND NITROGEN FILLING

SPRAYS . . . FOAMS . . .
METERED PURSE-SIZE AEROSOLS

- PRODUCT FORMULATION
- PACKAGE CREATION
- QUALITY CONTROL

PLASTIC TUBES & CONTAINERS FILLED



*Old
Empire*

PERFUMES &
COLOGNES

TOOTH PASTE

SHAMPOO

HAIR SPRAYS

DEODORANTS

SHAVING CREAMS

SKIN PREPARATIONS

HAND PREPARATIONS

OINTMENTS

PHARMACEUTICALS

HUMboldt 4-2121

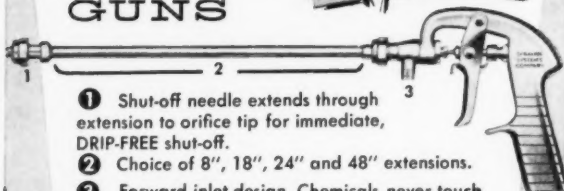
N.Y.C. WOrth 4-7870

865 Mt. Prospect Avenue, Newark 4, New Jersey

SPRAYING SYSTEMS CO.

GunJet®
No. 22-7676

SPRAY GUNS



- 1 Shut-off needle extends through extension to orifice tip for immediate, DRIP-FREE shut-off.
- 2 Choice of 8", 18", 24" and 48" extensions.
- 3 Forward inlet design. Chemicals never touch trigger control assembly.

three features for better performance

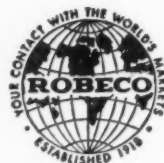
Here's a spray gun that's drip-free after shut-off no matter how it's held or how long the extension. Ends chemical waste and the nuisance of dripping. Supplied in complete choice of interchangeable orifice tips for flat, hollow cone, full cone and solid stream sprays. For information write for Data Sheet 7676.

For lighter duty spraying, see the Trigger TeeJet shut-off valve with straight or curved extensions. Also bottle sprayers for sanitation spraying and related applications.



SPRAYING SYSTEMS CO.

3217 Randolph Street • Bellwood, Illinois



INDUSTRIAL and PHARMACEUTICAL
CHEMICALS

NATURAL PRODUCTS

OILS

WAXES

CALCIUM HYPOCHLORITE
70% GRAN.

CALCIUM HYPOCHLORITE
60% POWDER

COPPER SULFATE

LINDANE

NAPHTHALENE

ORTHODICHLOROBENZENE

PARADICHLOROBENZENE

SPERMACE TI WAX U.S.P.

THALLIUM SULFATE

TRICHLOROETHYLENE

ROBECO CHEMICALS, INC.

25 EAST 26th ST., NEW YORK 10, N. Y.

CABLE ADDRESS "RODRUG" N. Y. ALL CODES

Murray Hill 3-7500

Situations Wanted

Production Specialist: 33 years old, married, background in aerosol and refrigerant packaging and basic chemical production. Desires opportunity in aerosol production. Address Box 451, c/o Soap.

Manager Soap Production: Over 20 years experience in production of toilet, laundry, coconut and glycerine soaps. Very well versed in manufacturing of detergents and all related fields. Good organizer. German background. Fluent in German, Spanish. Working in Latin-America and seeking employment in the USA. Address Box 450, c/o Soap.

Miscellaneous

Wanted: 25 to 50 gallon capacity glass-lined steam jacketed kettle with glass coated agitator, anchor type preferred. Address Box 436, c/o Soap.

Wanted: Standard Houchin 1200# soap frames. Send details to Box 453, c/o Soap.

Wanted—Close Outs: Aerosol products and chemical specialties. E. L. Berger, 71 Stanton St., New York 22, N. Y.

Business Buy/Sell

Sleeper: Well established specialty chemical company in northeast will return your investment within one year with adequate capital and marketing ability. Address Box 452, c/o Soap.

Go Public or Merge: Unusual plan developed by specialists to provide new sources of funds with capital gain advantages, estate tax savings and ready marketability of your assets. Also arrange private financing. Address Box 454, c/o Soap.

Partner or Sell: New York State corporation presently located on Florida's east coast, seeking ac-

FOR SALE Tablet Machines

- 1—RD-3 Stokes Rotary
- 1—DD-2 Stokes Rotary
- 1—RDD Stokes Rotary
- 1—F Stokes Single
- 1—#4 Colton Single
- 1—#3-B Colton Single
- 1—#3-DT Colton Single
- 2—10-35 Colton Rotary
- 1—#60 Kux

P. E. ALBERT & SON
21 Nottingham Way, Trenton, N. J.

tive partner or outright sale. Interested in continuing in present operation if agreeable terms can be met. Investment of \$8,000 to \$10,000 required. Address Box 439, c/o Soap.

Merge or Sell: Chemical specialty manufacturing company is for sale or will merge with reliable company. We manufacture automotive chemicals and some household chemical products. Replies held in strict confidence. Address Box 434, c/o Soap.

CHOICE PRODUCTION EQUIPMENT at LOW ECONOMY PRICES

- Dry Ribbon Mixers
- Dbl. Arm Jktd Mixers
- Sifters and Screens
- Grinders and Mills
- All Type Dryers
- Jacketed Cookers
- Kettles — Tanks — Reactors
- Filter Presses — all sizes
- Packaging Equipment —

Fillers — Labelers — Wrappers
Rental — Purchase Plan too —

Send your inquiry to
**FIRST MACHINERY
CORP.**

209-289 Tenth St., Brooklyn 15
Tel: Sterling 8-4672

For Sale

For Sale: At sacrifice. 1 soap crutcher in excellent condition, complete with motor and platform. Vermitox Laboratories, Inc., 44 William St., Newark, N. J.

For Sale: By I. E. Newman, 818 W. Superior, Chicago, Ill., CH-3-1425. Mixers. Marion-Munson, sizes 50# to 10,000# Crutchers—1,000-8,000#; Wrapper Type S; Auto Cutting Table; Bucket Elevators, Mills, Cutters, Crushers, Soap Equipment. Prices on request.

For Sale: Bowen pilot T-304 SS spray dryers, Sharples #16V inconel soap centrifugals, Hope single piston stainless filler. Perry Equipment Corp., 1410 N. 6th St., Phila. 22, Pa.

For Sale: 3 and 4 roll granite steel roller mills. Plodders. Grinders. Chippers. Crutchers. Slabbers. Cutting tables. Kettles. Filter presses. Mixers. Sifters. Foot and power soap presses. Partial listing. We buy surplus equipment. Stein Equipment Co., 107 — 8th St., Bklyn. 15, N. Y.

For Sale: MRM, 6 spout, vacuum liquid filler; Whirlwind portable screw capper; Gluemaster, semi-automatic label gluer; Day 450 gallon ribbon blender. Sell us your surplus equipment. Irving Barcan Co., 249-51 Orient Ave., Jersey City 5, N. J.

For Sale: At sacrifice. 1-1000 gal. tank with motor & paddles; 1-500 gal. tank; 1-300 gal. oil tank; 1 Stokes filler with motor; 1 Day powder mixing machine, 300 lbs. 1 wax jacketed kettle, 350 gal. 1 tube filling machine, 100 lbs. 2 powder bins; 2 drying racks. Vermitox Laboratories, Inc., 44 William St., Newark, N. J.

Now Available: Third edition HANDBOOK OF PEST CONTROL by Mallis. Price \$12.50. Outside U. S. add 50¢ for postage. See page 150.

Stepan Advances Black

Eldridge J. Black was recently appointed vice-president and general manager of the newly



Eldridge J. Black

formed industrial chemical division of Stepan Chemical Co., Chicago. Prior to his recent appointment Mr. Black was vice-president of sales for Stepan.

Stepan also announced appointment of Walter N. La Porte

as director of manufacturing of the new division. Mr. La Porte comes to Stepan from Monsanto Chemical Co., where he served as manufac-



Walter N. La Porte

turing superintendent. Previously he had been employed by Sun Oil Co. as a group leader in its process development laboratories.

Stepan's industrial chemicals division has manufacturing facilities at Chicago and Millsdale,

Ill.; and at Maywood, N. J. Products include a wide range of surface active agents and a number of basic materials such as methyl esters, nonyl phenol and p-tertiary butyl phenol.

— ★ —

Wolf to U. S. Borax

Appointment of Warren S. Wolf to the marketing department of United States Borax & Chemical Corp., Los Angeles, was announced late in April. He has been assigned to the firm's New York offices.

— ★ —

Potash in Europe

Max Potash, president of Polyvinyl Chemicals, Inc., Peabody, Mass., last month made an extended trip through Europe to study the potential of the European polymer emulsion market. Mr. Potash was to visit more than 50 European chemical specialty manufacturers, floor wax formulators, and paper, leather, and textile finishers, who are customers for the firm's polymer emulsions.

Highest Quality FATTY ACIDS

at lowest possible prices

LAURIC — 90%-95/96%-99%+

MYRISTIC — 90%-94%-99%

CAPRIC — 90%-96%

CAPRYLIC — 90%-96%

also

Sodium Lauryl Sulfate—86/90%

Samples and prices on request without obligation

AMATO AGENCY, INC.

11 Broadway New York 4. N. Y

Agents for:

Aarhus Oliefabrik A/S

Aarhus, Denmark

Kortman & Schulte, N.V.

Rotterdam, Holland

ADVERTISING
CLOSING DATE
for SOAP AND
CHEMICAL SPECIALTIES
is the

10th of preceding month

YOUR COOPERATION IN
FURNISHING COPY IN-
STRUCTIONS ON TIME
WILL HELP US MEET OUR
PUBLICATION DATE.

Premiums (From Page 65)

ness. By the time these competitive companies realized that conclusion-jumping is an athletic event requiring no skill or practice, but which is often fatal, it had become the largest selling brand in the entire market. When they did wake up to what was happening, competitive companies did their best to combat "Breeze" and its textile premiums, but too late. So they tested to see if there was more room in the same boat. There was, and thus appeared "Duz" with textile premiums. If you can't lick 'em, join 'em.

Whereupon "Breeze" retaliated by offering its textile item with a blue detergent product, as well as with the original white product, and lost not a box of business to the imitators, who simply expanded the market for textile premiums.

Dish Cloths Everywhere

Once established, these brands pumped textile premiums into Canadian homes at a fantastic rate. Face cloths were being absorbed at 12 million a year, and dish towels at 6 million a year. This, in a country of only 4 million homes. This was so unbelievable that we had to run some research to enable us to believe it. We found in one city that 35% of all housewives had 2 dozen or more face cloths on hand, and 5% had over 4 dozen on hand—and were still acquiring them. Premium textiles were being used for such purposes as, and I quote, "silencing the telephone," "wrapping sandwiches," "covering the dresser," and "daughter's trousseau."

Ten per cent of all women said they used these textile premiums as gifts. Since over half of the population had bought these brands, it is difficult not to think of a gigantic game of Old Maid.

That was the year the soap manufacturers received the annual

award for outstanding merchandising, presented by the makers of face cloths.

The textile brands demonstrated conclusively that Canadian housewives would buy combinations of washing powder with premiums. It was a foregone conclusion other brands would branch out into other fields, as "Bonus" did with silver-plated flatware.

It then became inevitable that someone else would offer flatware in stainless steel rather than in silver plate, and "Duz" did it.

Once the flatware premium brands started to set the dinner table, "Tide" decided to help out with chinaware.

And still another brand, "Extra," made it easier for the consumer to eat in style, offering a blue detergent instead of a white one. "Bonus" with chinaware was still another entrant in the chinaware field.

"Super Suds" is the latest, and I am sure not the last, combination of detergent and premium to appear in Canada, offering more dinnerware, but this time in break-resistant—Melamine.

At the peak of their popularity to date, these premium-inside-the-package brands accounted for over 40% of all the washing powder volume sold in the entire country of Canada.

(To be concluded)

— ★ —

ISM Show in Detroit

The fifth annual Sanitation-Maintenance Show sponsored by the Institute of Sanitation Management, will be held in Detroit, Oct. 25-27, at the Sheraton-Cadillac Hotel. A four-day conference scheduled for Oct. 24-27, in conjunction with the show will cover specific problems of sanitation maintenance. Latest equipment and new products in sanitation maintenance will be on exhibit at the show, which is expected to have more than 3,500 visitors. The event is under the management of Sanitation Management Shows, Inc., 19 West 44th St., New York.



Test Acme Shellac for wear in your usual manner . . . or unleash an army of small boys if you prefer. Whatever test method you use, Acme will give you better floor service.

ACME SHELLAC

THE INDUSTRY STANDARD

- Scientifically Controlled
- Rapid Solubility
- Lowest Alkali Demand
- Best Color Stability
- Surpasses the Critical Needs of the Floor Polish Industry

Make us Prove It!

Attach this coupon to your letterhead today. We will send you technical data and a sample at no obligation.

ACME

SHELLAC PRODUCTS CO.

108 Blanchard Street • Newark 5, New Jersey

Gentlemen: Please send me
Technical Data and Sample

NAME _____

COMPANY _____

ADDRESS _____

CITY _____

STATE _____

index to advertisers

Acme Shellac Products Co.	269	Fairfield Chemicals Division. 4th Cover		Pilot Chemical Co., of California. 56, 240	
Aero-Chem Fillers, Inc.	199	Mineral Products Division	40	Polyvinyl Chemicals, Inc.	146
Aerosol Machinery Co.	211	Fries & Fries, Inc.	256	Precision Valve Corp.	184, 185
Aerosol Techniques, Inc.	199, 204	Fritzsche Brothers, Inc.	253	Prentiss Drug & Chemical Co.	111
Air Reduction Chemical Co.	82	Fuld Brothers, Inc.	166	Price, Dr. Donald	261
Allied Chemical Corporation,				Procter & Gamble Co.	60
General Chemical Division	196, 197	Gard Industries, Inc.	199	Pylam Products Co.	260
National Aniline Division	36	Geigy Agricultural Chemicals	140		
Nitrogen Division	34	Gillespie-Rogers-Pyatt Co.	116	Reichhold Chemicals, Inc.	108
Solvay Process Division	87, 245	Givaudan-Delawanna, Inc.	54, 236	Reilly Tar & Chemical Corp.	156
Almo Laboratories	258	Gross & Co., A.	134	Rison Mfg. Co.	174
Amato Agency, Inc.	268	Guardian Chemical Corp.	255	Robeco Chemicals, Inc.	266
American Agricultural Chemical Co.	79			Rohm & Haas Co.	62, 143
American Alcolac Corp.	85	Harchem Div., Wallace & Tiernan.	161	Roure-Dupont, Inc.	8, 9
American Can Co.	203	Hercules Powder Co.	18, 130, 144		
American Cholesterol Prods., Inc.	85	Hooker Chemical Corp.	84, 212	Sandoz, Inc.	43
American Potash & Chemical Corp.	232	Hostawax Co.	112	Schenectady Varnish Co.	125
Anchor-Hocking Glass Corp.	164, 165	Hudson Laboratories, Inc.	261	Schimmel & Co.	242
Antara Chemical Div., General				Schrader's Son, A.	207
Aniline & Film Corp.	77, 145	Industrial Biology Labs., Inc.	261	Scientific Associates	261
Archer-Daniels-Midland Co.	50, 51	Intex Chemical Corp.	45	Shanco Plastics & Chemicals, Inc.	128
Argueso & Co., M.	160			Shell Chemical Corp.	137, 158
Arizona Chemical Co.	46	Jefferson Chemical Co.	238	Shulton, Inc.	17
Arkansas Louisiana Chemical Corp.	48	Johns-Manville	135	Sindar Corp.	152
Armour Industrial Chemical Co.	16	Jones & Co., R. A.	218	Foster D. Snell, Inc.	254, 261
Aromatic Products, Inc.	109			Solvents & Chemicals Group, The.	148
Atlantic Refining Co.	10, 11	Kartridg Pak Co., The	170	Sonneborn Chemical & Refining	
Averil, Inc.	199	Kaysing Corp.	199	Corp.	228
		Kessler Chemical Co.	80	Spraying Systems Co.	266
Badertscher, A. Edison	261	Kiefer Machine Co., The	214	Stallfort & Sons, Inc., John C.	186, 199
Barco Wax Co., Division of		Kiwi Coders Corp.	206	Stepan Chemical Co.	6, 7
Petrolite Corp.	151	Knox Glass, Inc.	175	Sterwin Chemicals Inc.	92
Barr & Co., G.	168, 191	Krystall Chemical Co.	226	Stillwell & Gladding, Inc.	263
Bio-Search & Development Co.	261			Strouse, Inc.	199, 201
Blockson Chemical Co.	49	La Wall & Harrison	261	Sun-Lac, Inc.	199
Books	44, 271	Leberco Laboratories	261		
Bradshaw-Praeger & Co.	259	Leeben Color & Chem. Co., Inc.	263	Testfabrics, Inc.	263
Brockway Glass Co.	162	Lehmann Co., J. M.	224	Tex-ite Products Corp.	200
Builders Sheet Metal Works, Inc.	200	Lewers, Dr. W. W.	261	Thomasson of Pa., Inc.	200
				Tube Manifold Corp.	208
Candy & Co.	12	Magnus, Mabee & Reynard, Inc.	260		
Central Can Co.	167	Mantrose Corp., The	132	UBS Chemical Corp.	138
Chase Products Co.	195, 199	Mazzoni, S.p.A., G.	216, 217	Ultra Chemical Works, Inc.	32, 33
Chemical Specialties Mfrs. Assn.	94	McCutcheon, Inc., John W.	261	Unger & Co.	3rd Cover
Chilean Iodine Educational Bureau.	256	McLaughlin Gormley King Co.	106, 107	Union Carbide Corporation,	
Clayton Corp.	193	Metro Glass Division	169	Silicones Division	157
Colton Co., Arthur	220	Miranol Chemical Co., The	47	Union Carbide Chemicals Co.	
Commercial Solvents Corp.	31	Mona Industries, Inc.	248	Division	189, 251
Continental Can Co.	172	Monsanto Chemical Co.	19-22	Union Standard Equipment Co.	265
Continental Filling Corp.	176	Morton Chemical Co.	118	U. S. Borax & Chemical Corp.	14
Continental Oil Co.	15, 246			U. S. Bottlers Machinery Co.	221
Cowles Chemical Co.	124	National Research & Chemical Co.	199	U. S. Industrial Chemical Co.	78
Cox, Dr. Alvin J.	261	Newman-Green, Inc.	180		
Crown Cork & Seal Co., Inc.	194	Newman Tallow & Soap Machy Co.	262	van Ameringen-Haebler Div. of	
		Nopco Chemical Co.	52, 53	International Flavors &	
Dawe's Laboratories, Inc.	266	Norda	39	Fragrances, Inc.	58, 90, 91
Deutsche Hydrierwerke, G.m.b.H.	244	Northwestern Bottle Co.	192	Van Dyk & Co., Inc.	160
Dodge & Olcott, Inc.	2nd Cover	Noville Essential Oil Co.	258	VCA, Inc.	190
Dow Corning Corp.	95			Velsicol Chemical Corp.	117
Dreyer, Inc., P. R.	96	Old Empire, Inc.	266	Verley & Co., Albert	83
du Pont de Nemours & Co., E. I.	181	Olin Mathieson Chemical Corp.,		Verona Aromatics, Div. of Verona	
Dura Commodities Corp.	135	Chemicals Division	252, 257	Pharma Chemical Corp.	4
		Onyx Chemical Corp.	3	Victor Chemical Works	222
Eastern Can Co.	188	Oronite Chemical Co.	28, 29		
Eastman Chemical Products, Inc.	105			Washburn Co., T. F.	93
Emery Industries, Inc.	35	Penick & Co., S. B.	122	West End Chemicals Co.	250
Enjay Co.	38	Pennsalt Chemicals Corp.	209	West Penn Mfg. & Supply Corp.	210
Ertel Engineering Corp.	220	Pennsylvania Refining Co.	264	Western Filling Corp.	200
		Perry Brothers, Inc.	88	Western Petrochemical Corp.,	
Felton Chemical Co.	27	Peterson Filling & Packg. Corp.	182, 199	Warwick Wax Division	142
Fine Organics, Inc.	110	Pfizer & Co., Charles	37	Wisconsin Alumni Research Found.	263
Firmenich, Inc.	30	PFW	41	Witco Chemical Co.	234
Fleuroma, Inc.	230	Philadelphia Quartz Co.	81		
Florasynth Laboratories, Inc.	120			Zinsser & Co., William	264
Food Machinery & Chemical Corp.,					
Chlor-Alkali Division	13				

COMING MEETINGS

American Oil Chemists Society, fall meeting, New Yorker Hotel, New York, Oct. 17-18.

Association of American Soap & Glycerine Producers, 34th annual convention, Waldorf-Astoria Hotel, New York, Jan. 25, 26 and 27, 1961.

Canadian Agricultural Chemicals Association, Britannia Hotel, Lake of Bays, Muskoka, Ont., Sept. 12-14.

Canadian Manufacturers of Chemical Specialties Association, 3rd annual convention, Queen Elizabeth Hotel, Montreal, Oct. 24-26.

Chemical Specialties Manufacturers Association, 46th mid-year meeting, Drake Hotel, Chicago, May 16-18; 47th annual meeting, Hollywood Beach Hotel, Hollywood, Fla., Dec. 3-9.

Chemical Specialties Manufacturers Association, first annual golf outing, June 16, Knollwood Country Club, White Plains, N. Y.

Drug, Chemical & Allied Trades Association, 70th annual meeting, Sagamore Hotel, Bolton Landing, N. Y., Sept. 15-18, 1960.

Industrial & Building Sanitation-Maintenance Show and Conference, Sheraton-Cadillac Hotel, Detroit, Oct. 24-27.

International Congress of Surface Activity, Cologne, Germany, Sept. 12-17.

Manufacturing Chemists' Assn., 88th annual meeting, The Greenbrier, White Sulphur Springs, W. Va., June 9-11.

National Agricultural Chemicals Association, annual meeting, Del Coronado Hotel, Coronado, Calif., Sept. 27-29.

National Pest Control Association, annual meeting, Hotel Mayo, Tulsa, Okla., Oct. 17-20.

National Sanitary Supply Assn., 37th annual convention, Fontainebleau Hotel, Miami, Fla., May 22-25, 1960.

Packaging Institute, 22nd seminar, Statler Hotel, New York, Oct. 31, Nov. 1, 2.

Packaging Machinery Manufacturers Institute, (PMMI) fourth annual show, Cobo Hall, Detroit, Nov. 7-10, 1961.

Soap Industry Seminar of the French Oil Chemists (ITERG), Paris, June 13-16.

Society of Cosmetic Chemists, Chicago Chapter, June 14, Oct. 11, Nov. 8.

Synthetic Organic Chemical Manufacturers Association, monthly luncheon meeting, Roosevelt Hotel, New York, June 14, Sept. 13, Oct. 11, Nov. 10; annual meeting and annual dinner, Dec. 8.

Toilet Goods Association, 25th annual meeting, Poland Springs House, Poland Springs, Me., June 27-29, 1960. Scientific Section, Waldorf-Astoria Hotel, New York, Nov. 30, 1960.

BOOKS...

**Books for ready reference in your
plant • home • office • laboratory**

* * * *

1. Surface Active Agents and Detergents by Schwartz-Perry.

Volume I—590 pages, 51 illustrations. Covers manufacture, chemistry and practical applications of surface active agents. Price \$13.50

Volume II—860 pages, 26 illustrations. Covers processes for synthesizing surfactants, composition of surfactants and their chemistry and application. Price \$19.50.

* * * *

2. Detergent Evaluation and Testing by Jay C. Harris.

220 pages, 26 illustrations. A critical selection of methods and procedures for testing detergents. Price \$4.50.

* * * *

3. Soap Manufacture by Davidson, et al.

Volume I—537 pages, 66 illustrations, 118 tables. Covers history of soap, principles of soap manufacture, fats and other raw materials for soap manufacture. Price \$13.50.

Volume II—Now in course of preparation.

* * * *

For shipments outside of U. S. A., add 50¢
to each of above prices.

* * * *

— Send Check with Order —

MAC NAIR-DORLAND CO.

254 West 31st St., New York 1, N. Y.

Enclosed find check for \$.....for which send me
the books checked above:

Company

Address

City State

By

(Add 3% sales tax if in New York City)

tale ends

THE Milwaukee Journal recently received a letter from an irate reader complaining about the quality of the soap dispensed in the washrooms of the courthouse. The gentleman stated that he could not get enough soap from the dispensers to clean his hands clean. What the fellow doesn't know is that even liquid soap can be diluted beyond the "point of no return." And that such highly diluted soaps are as common in public washrooms as fleas on a mongrel.

* * * * *

Rate of production of plastic bottles continues to mount. By the end of 1960, output of rigid plastic bottles will exceed one billion units. In 1959, this figure was 800 million of which more than half were used for liquid detergents and a large percentage of the balance for chemical specialties such as waxes, polishes, disinfectants, shampoos, hand cleaners, bowl cleaner, spotting fluids, tire cleaner, etc. By 1962, the total output of all plastic "squeeze bottles" is expected to approximate six billion units per year, say the National Printing Ink Research Institute.

* * * * *

Cinch job! Looking over a recent issue of "The Crown," house magazine of Crown Cork & Seal, Philadelphia, we note with interest that sales manager of the non-food can division of the company is Seth R. Schneible. He is listed as having charge of sales for three-piece aerosol cans, seamless Spra-Tainer aerosol cans, aerosol valve mounting caps, aluminum oil cans, one gallon anti-freeze cans, cone top cans, doubletite cans, motor oil cans, rectangular cans, slip cover cans, and five gallon pails. Outside of that, the guy has nothing to do.

* * * * *

Sartorial elegance can have its drawbacks. Witness the recent meeting of the CSMA Board at Clearwater, Florida. Les Berger of Carbide and Don King, head of Masury-Young and former CSMA prez, arrived at a cocktail party arrayed in bright red sports jackets. Some of the assembled throng gasped once or twice, but nary an untoward incident occurred,—that is until Les and Don became lost in a group of waiters and bar boys also attired in bright red jackets. It reminded us somewhat of a firemen's picnic we had attended as a kid.

* * * * *

After hearing a few words of wisdom about the new Food Additives Amendment from Prez George Fiero of CSMA, Doc Hamilton, exec v.p. of the same, and John Conner, its legal counsel, members of the CSMA Board

assembled in Florida last month were obviously shocked at the apparent seriousness of the situation as far as insecticides, disinfectants, sanitizers, detergents, and other chemical specialties are concerned. Even waxes and polishes may also find themselves subjects for scrutiny under the new law as "accidental food additives." It all could add up to a very serious situation.

* * * * *

A gold plated can yet! This is the 150th anniversary of the invention of the metal can and the Can Manufacturers Institute will present a gold plated aerosol can to the Aerosol Division of CSMA at the CSMA meeting in Chicago. Why an aerosol can? Because it represents the latest development in metal cans after 150 years fusing around with other cans. Isn't it just a publicity stunt for CMI? Sure! Why do you suppose the can is gold plated?

* * * * *

The size of couponing operations by some of the larger soapers is sometimes positively staggering. Not too long ago, two big soapers respectively mailed out to housewives around the country 42 million and 38 million envelopes each containing five or six coupons. And that, gentle reader, amounts almost to half a billion indi-

vidual coupons. What the rate of redemption was, we don't know, but we'll bet it was high. If we figure the percentage of misredemption which in some parts of the country is said to run as high as 60%—wow!

* * * * *

Already some of the leading can companies are reported to have shut down production lines for metal detergent cans. Those with facilities for turning out high density polyethylene containers are just switching production. Others are reported in a quandary. The change over to polyethylene cans or bottles or whatever we want to call them is taking place apparently at a much faster rate than was originally thought possible. Enough to make a fellow really dizzy!

* * * * *

John Rodda, general manager of the Fairfield Chemical Division of Food Machinery has just about completed a 13 weeks course at Harvard Business School for executives. Not much has been seen or heard of John in recent months in and about the insecticide business. Must be studying or something. A couple of his Fairfield colleagues are becoming really worried. They fear that John may return to New York from his stay at Cambridge sporting a Harvard accent.

Jimmy Thompson, center, golfer and golf director of the sports division, Dunlop Tire and Rubber Co., New York, spoke on golf experiences at the regular monthly luncheon of CIBS in March. With Mr. Thompson are Lamson Scovill, left, Scovill Manufacturing Co., CIBS president, and H. Robert Miller, White Metal Manufacturing Co., Newark, N. J., golf chairman. Speaker for the April luncheon was Charles T. Lipscomb, president of the American Newspaper Publishers Association, on "Selling and Advertising."



